

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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JAMES WYATT, 1746-1813

Architect of No. 9 Conduit Street; the Oxford Street "Pantheon"; Fonthill Abbey, Ashridge Park; and restorer of Salisbury Cathedral

The R.I.B.A. portrait hitherto attributed to John Opie (1761-1807) has been shown, by a recent cleaning, to be unlike Opie's usual work, and it is almost certainly not by him. It seems to be a work of *pastiche*, executed in a conscious imitation of Rembrandt's style. It is undoubtedly a contemporary portrait

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JOURNAL OF THE ROYAL INSTITUTE *of* BRITISH ARCHITECTS

VOL. 42. 3RD SERIES

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No. 13

Journal

Sir Banister (Flight) Fletcher, F.S.A., Past President, has made a magnificent gift to the Institute of £500 to enable the Library to publish a volume catalogue. For many years the Literature Standing Committee has lived in the hope that the publication of a catalogue would be possible, and with this in mind arranged that the card index for the new library should be printed and the type kept standing for use when and if the opportunity should turn up of carrying their ideas into effect. Publication of a catalogue is an expensive business, and nothing that the Literature Committee could have done of itself would have enabled them to publish the volume at a price which would have been within the means of those most likely to need it. As a result of Sir Banister's generosity the committee can start preparing the volume at once with the certainty of being able to sell it at a price which will probably be under half its production value, and within the means of all. A considerable amount of work still remains to be done; the thousand or so articles received by the library since the card index printing was started and other entries, notably those relating to the old books, have still to be printed, then all the entries have to be arranged in catalogue order, and the indexes compiled before the actual printing can be started; but work is already in hand, and will be carried to its conclusion without delay.

A published volume catalogue of the library will immediately enable members of the Institute outside London to benefit to a far greater extent than ever before from the wealth of the collection. It will not only advertise what the Library has but by showing up the Library's deficiencies, too, will encourage the Literature Committee in their endeavours to fill gaps and will perhaps encourage members to give practical support to the Committee's efforts. It will provide scholars throughout the whole world with the most complete bibliography of architecture and building that has yet been provided, and will increase the prestige of the Library and of the Institute and thereby the prestige of all the members of the Institute who share in the ownership of the Library.

On Tuesday, 7 May, a settlement was announced of the action in which the Incorporated Association of Architects and Surveyors and certain individual plaintiffs claimed damages for alleged libel from the Royal Institute of British Architects and an individual defendant.

In announcing the settlement, in Mr. Justice Finlay's court in the King's Bench Division, Sir Patrick Hastings,

K.C., who appeared for the plaintiffs with Mr. J. N. Emery, said that the alleged libel was contained in a letter written in 1933. Both Mr. Norman Birkett, who appeared for the defendants, and he had advised their clients that, in the interests of the architects' profession, it was obviously desirable to settle the litigation, and he was glad to say that that advice had been followed. Mutual explanations had been made and accepted, and the litigation was at an end. With his Lordship's consent, the action would be withdrawn on terms which provided that no costs should be paid by anyone to anyone.

Mr. Birkett, who appeared with Mr. G. O. Slade for the defendants, said that he agreed with the statement which had been made.

Mr. Justice Finlay, in assenting to the suggested course being taken, said that he was sure that the parties had been well advised.

Recent correspondence in the Press has revealed that there is some misunderstanding regarding the procedure for nominating members to serve on the R.I.B.A. Council and Standing Committees. A letter from the Secretary, explaining the procedure simply and briefly, has appeared in all the professional papers and has, we hope, removed the last traces of misunderstanding on this important subject.

Every member in the United Kingdom and Irish Free State will have received already the list of members who have been nominated by the Council. It was clearly stated on this list that further nominations by any seven or more members may be received up to the close of the Annual General Meeting, which is to be held on Monday, 13 May, at 8 p.m. More nominations are welcomed. It is never the desire of the Council or of any of the Standing Committees to avoid well-contested elections; contested elections are, in fact, assured by a Bye-law which prescribes that in the case of Ordinary, Associate and Licentiate Members of Council and Standing Committees more nominations than there are vacant places shall be made. It is a condition, laid down in the Bye-laws, that every nomination shall be accompanied by a written statement by the nominee to serve if elected. The Voting papers are issued not less than ten days after the publication in the JOURNAL of the report of the proceedings of the Annual General Meeting. The JOURNAL with the report will appear on 25 May.

Last year just under 1,400 votes were received for the Council election and rather less for the Standing Committee elections. Although it is undoubtedly true that this represents a higher percentage vote than is usual

in the elections of other bodies similar to the R.I.B.A., it is clearly not high enough. The increased interest in the affairs of the Institute which has been evident in recent months should assure that many more people than ever before will fulfil their responsibilities this year.

It has not been possible to find space in this number of the JOURNAL for the documents relevant to the campaign for the better employment of architects in the building work of Local Authorities. The campaign has, however, begun with what may appear to have been a reverse. The amendment to the Housing Bill moved by Mr. Alfred Bossom in Standing Committee A was negatived. This amendment, the full text of which was published in the last JOURNAL, was intended to ensure that all housing work under the Bill should be carried out by registered architects. The Minister of Health declined to accept a new principle which he said would mean the reorganisation of existing machinery for the production of housing.

The Minister, after paying a tribute to the services of the architectural profession—including the Panel System—said "The local authority will have the very strongest objection to it—as it would knock out the services of a substantial number of their officials which they at present employ for this purpose, and whose qualifications from an architectural point of view nobody would doubt in a practical way." To this Sir Percy Harris replied that the Minister "has gone out of his way, apparently, to encourage the most undesirable practice of Local Authorities utilising the services of unqualified men. Borough surveyors may be very good men as borough surveyors, but they are not architects."

It can be said, after the event, that the R.I.B.A. Public Relations Committee would have been both surprised as well as gratified had the amendment been carried. It is fully realised that, like the campaign for Registration, the campaign for Statutory Recognition of Architects is likely to be a long one. The moving of this amendment has had the effect of arousing a considerable force of support in Parliament and, far from being ended, the campaign has only begun. The present demand for quantity in housing must in time become one for quality also. Meanwhile, direct approach to local authorities is being followed.

The satirical print at the foot of this page shows John Nash uncomfortably spiked on the spire of his own church in Langham Place. Poor Nash was rudely treated by his contemporaries and was hardly better treated by the Victorians, who found their own pseudo moral and scholastic reasons for objecting to a man and work they could not understand. But all the time there has been with Londoners, at least, an undercurrent of admiration for one who visibly has contributed more to the coherence of London's plan and given her a greater measure of fine building than any other single person, saving only Christopher Wren. But, between prejudice and the immoderate praise which

came from time to time as its reaction, Nash has never been understood and his position hardly more secure or comfortable in the architects' Parnassus than it is shown to be in the print.

At last, however, Nash and his work have secured the critical attention they deserve. Mr. Summerson, in his recently published life of him, has made a brilliantly able study of Nash's personal history, his work and his social and political environment, which must be the channel through which all future studies of Nash are made. Somewhere or other Mr. G. K. Chesterton has trounced "the modern innovation which has substituted journalism for history." Every one acquainted with modern biographical writing knows what Mr. Chesterton means. Mr. Summerson has written history with the rare competence of exact scholarship and done it, without a page of dullness, to make one of the liveliest architectural biographies in our language. On a later page of the JOURNAL is a full review by Professor A. E. Richardson, but here it is possible to welcome this book as a real contribution to architectural knowledge and entertainment by a hardworking member of the Institute's Literature Committee.



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Form in light. The Gaumont Theatre, Paris. Architect: Henri Belloc

[L'Architecture d'Aujourd'hui]

MODERN LIGHTING

BY WALDO MAITLAND, A.R.I.B.A., A.A.D.I.P.

INTRODUCTION

The purpose of this article is to give a brief outline of the possibilities and application of modern light sources to the interiors and exteriors of buildings. All types of buildings cannot, of course, be dealt with, nor is it possible to describe the solutions of particular lighting problems in great detail. It is hoped, however, that the information may prove of value to members in making clear to them the recent great expansion in the possibilities of artificial illumination and also in helping them to make adequate provision for lighting equipment. It is little realised that there is to-day available a greatly increased range of efficient lighting equipment capable of providing scientifically designed lighting. Lighting may be controlled with great accuracy, and because this material is available, the architect need have no fear that his ideas cannot be accurately executed. There are naturally certain limitations as to what can and cannot be done, and it is the intention in this article to discuss these points. Lighting to-day has become of great importance from both utilitarian and decorative aspects. It provides a definite contri-

bution both to the efficiency and to the final architectural effect of a building. In consequence, a greater degree of forethought is necessary in considering lighting at an early stage of the design.

Light Surfaces versus Light Points.—The general tendency in lighting to-day is to eliminate the excessive use of small suspended point sources and to distribute the light over large areas of ceilings and walls. This accords with the general tendency in buildings to-day to use large glass areas to admit daylight, providing a soft, suffused light from the sky. This does not mean, however, that point sources are not employed, nor that the whole areas of ceiling or walls are flood-lit; these matters are governed by the general character and design of the building concerned.

In the past, where point sources of illumination were used, calculations were upon the basis of so many foot-candles on the horizontal plane, some 2 feet 6 inches from the ground. This principle is still employed in the cases of factories, schools, offices or wherever utilitarian lighting is called for. Owing to the flexibility and

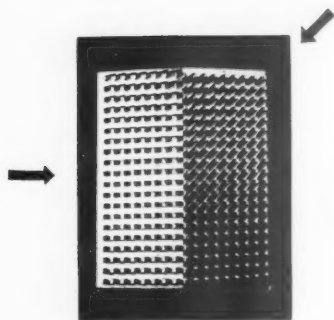


Fig. 1.—The effect of light on form. Two similar surfaces lit from different directions. The arrows indicate the direction of the light. Photographs on this page lent by the Lighting Service Bureau

efficiency of present-day light sources, the lamps can now be placed upon ceiling, walls or floors, either concealed or exposed; this means that, technically speaking, lighting must be considered from the points of view of both quantity and quality, upon vertical as well as horizontal surfaces, rather than from that of foot-candles on the horizontal plane only. Consideration must be given to the different diffusing and reflecting media, with the result that the position of the lighting in relation to the interior becomes all important. These are matters of an architectural nature which the designer must bear in mind. Lighting should sympathise with the architectural form and appreciation of form will be dependent on the manner in which the light is directed and controlled. Simple examples of this are found in Figs. 1, 2 and 3, which show how direction of light may emphasise or destroy form.

Apart from buildings which are lit chiefly from the aesthetic standpoint, industrial buildings demand special care in their lighting arrangement, first to avoid glare, and secondly to supply the maximum illumination consistent with efficient production. Many experiments and tests show that acuity of vision is improved by increased intensity, resulting in greater output, fewer mistakes, and healthier employees. The intensities naturally vary according to the work which has to be performed; some idea of the differences

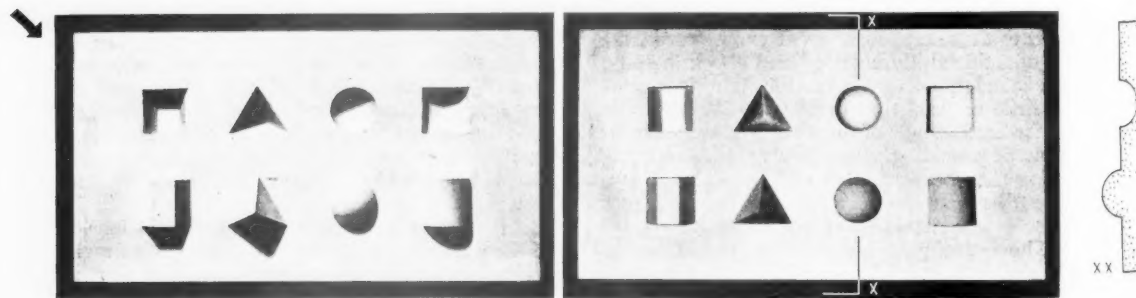
required can be seen by reference to Handbook No. 2 C, issued by the Lighting Service Bureau, No. 2 Savoy Hill, W.C.1.

Watts per Square Foot?—The following table gives the illumination in foot-candles recommended for various interiors. Architects frequently use the rough method of calculating illumination by wattage per square foot. Since this varies according to the type of fitting, the type of lamp, the light absorption of the fitting and the reflecting qualities of walls and ceiling, the method clearly cannot be considered even reasonably accurate. Consequently no such figures have been given in the table.

Definitions.—The following definitions are necessary if the table here given is to be fully understood. A Foot-Candle is a unit of intensity of illumination equal to the illumination falling upon a surface one foot distant from a one candle-power source. If a uniform point source of one candle-power is placed at the centre of a sphere of one foot radius, every point on the inner surface of the sphere receives an illumination of one foot-candle. A Lumen is the total amount of light intercepted by or falling upon a surface of one square foot every point of which is at a distance of one foot from a point light source of one candle-power. The total flux emitted by a uniform light source of one candle-power is 4π (=12.57 lumens). Light is measured by a meter known as the foot-candle meter or photometer, the latest models of which are operated by selenium cells.

RECOMMENDED FOOT-CANDLE ILLUMINATION FOR BUILDINGS OTHER THAN INDUSTRIAL

AUTOMOBILE SHOWROOM	..	..	15-20	
BANK	..	..	11-13	
CHURCH	..	..	..	Special lighting
CINEMA	..	..	..	" "
DANCE HALL	..	..	..	" "
DENTIST				
Waiting Room	..	..	4-6	Supplementary local lighting often required
Surgery	..	..	11-13	
DRAWING OFFICE	..	..	25-50	
GARAGE	..	..	4-6	
Garage Repair Department	..	..	11-13	



The effect of light on form. In Fig. 2 (left) the light is falling from the direction of the arrow on to a series of different forms. In Fig 3 (right) the light is at right angles to the surface. Forms lit in this way never reveal their true shapes

GYMNASIUM	.. .. .	11-13	
HOSPITAL	.. .. .	
Wards and Private Rooms	.. .. .	2-3	} Supplementary local lighting
Waiting and Receiving Room	.. .. .	4-6	
Corridors	.. .. .	2-3	
Operating Table	.. .. .	100-500	
Operating Theatre	.. .. .	11-13	} Special lighting
Laboratories	.. .. .	11-13	
HOTEL	.. .. .	
Lounge and Dining Room	.. .. .		} Special lighting
Writing Room	.. .. .	7-9	
Kitchen	.. .. .	7-9	} Bed-head lights, etc., also required
Bedrooms	.. .. .	4-6	
Corridors	.. .. .	2-3	
INDOOR RECREATIONS	.. .. .	
Billiards (general)	.. .. .	2-3	
Billiards (on table)	.. .. .	15-20	
Racquet, Badminton, Indoor Tennis	.. .. .		} Special lighting
Skating Rinks	.. .. .	7-9	

LIBRARY	.. .. .	
Reading Rooms	.. .. .	8-10	} Horizontal plane
Book Stores	.. .. .	2-3	
OFFICE BUILDING	.. .. .	
General Office	.. .. .	11-13	
Private Offices	.. .. .	7-9	} Special lighting
PUBLIC HALL	.. .. .	
RESTAURANT	.. .. .	
SCHOOL	.. .. .	
Class Rooms, Library and Office	.. .. .	7-9	
Corridors and Stairways	.. .. .	2-3	
Drawing and Art	.. .. .	15-20	
Laboratories	.. .. .	8-12	
Lecture Theatre	.. .. .	4-6	
Manual Training	.. .. .	8-12	
Sewing Rooms	.. .. .	15-20	
Stairways and Corridors	.. .. .	2-3	
TELEPHONE EXCHANGE	.. .. .	4-6	
THEATRE	.. .. .		} Special lighting
TOILET AND WASHROOM	.. .. .	4-6	

LIGHT SOURCES

The following is a list of the types of electric lamps at present available:—

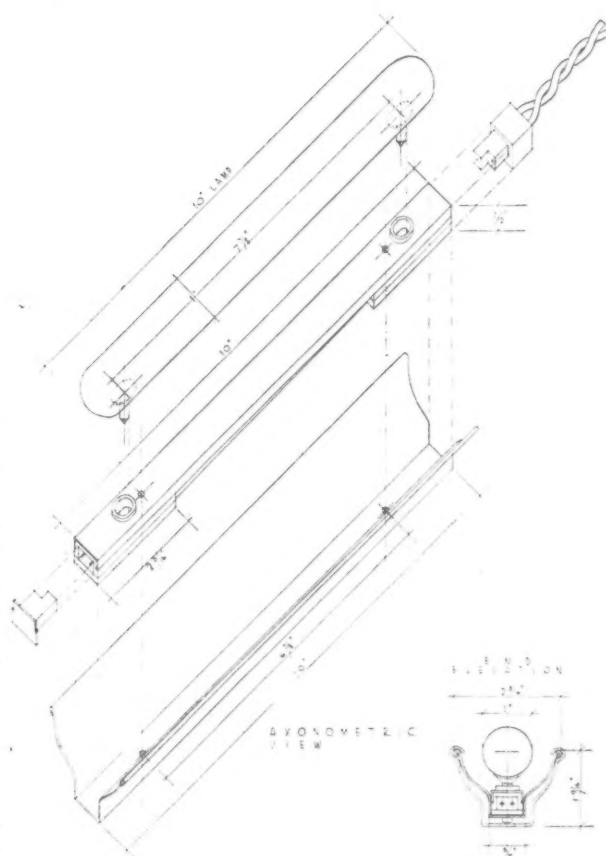
1. Vacuum filament lamps:—
 - (a) Pear-shaped: (1) Clear. (2) Pearl.
 - (b) Tubular: (1) Clear. (2) White opal. (3) Coloured (blue, green, ivory, light yellow, dark yellow, amber, orange, pink, flame, red).
2. Gas-filled filament lamps:—
 - (1) Clear. (2) Pearl. (3) White opal.
3. Gas discharge lamps:—
 - (1) Hot cathode (sodium vapour lamp).
 - (2) High pressure (mercury vapour lamp).
4. Gas discharge tubes:—
 - (1) Sunlight—nitrogen gas.
 - (2) Daylight—carbon dioxide.
 - (3) Neon.

LIGHT SOURCES AND THEIR USES

The following notes are regrettably technical, but true description is not possible without this.

VACUUM LAMPS (SQUIRREL-CAGE TYPE).—These are to-day so little used as to be hardly worth description.

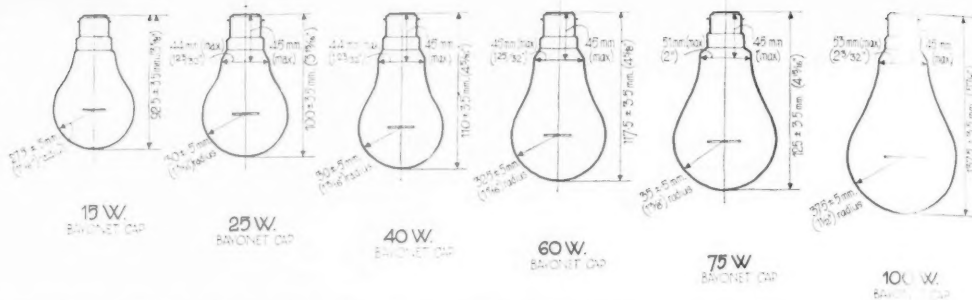
VACUUM LAMPS (TUBULAR).—The varieties of light source possible with tubular lamps are shown by study of Figs. 4, 6, 7 and 8. The table on page 757 shows that the efficiencies are much the same but lower than the efficiencies of the corresponding wattage in the gas-filled lamps. It is, therefore, desirable, where the efficiency of the installation is important, to use those lamps which provide a high efficiency value. It is naturally impossible in all lighting problems to confine one's design to the use of one type of lamp, for in many cases it is not possible to provide sufficient space to house both reflector and lamp of the pear-shaped type; in such cases the tubular form of lamp with a reflector may well be used. In interiors of large scale it is desirable to use lighting equipment of corresponding size. Efficiency increases with the size of lamp, and therefore in such interiors it is likely that the possibility of designing large-scale



[Architect and Building News

Fig. 4.—The fitting of side-contact tubular lamps

Fig. 5.—Sizes and types of gas-filled lamps (reading across both pages)



housings, such as cornices, will be taken advantage of. In small rooms the reverse is the case.

Opal tubular side-contact lamps are made in a variety of lengths from 1 foot to 4 feet. The opal glass reduces glare to some extent, but apart from such cases as exhibitions their decorative use seems rather more successful when used away from wall surfaces, that is, in the form of fittings, than placed directly upon the wall or ceiling. Owing to the fact that the tube presents a surface of a much lower brilliancy than a clear lamp it can be used without any further diffusing material surrounding it. There is a tendency, however, when placed at eye-level (as in the case of mirror lighting), for the tube to appear too brilliant; but at any distance this effect is overcome. Single-ended tubular lamps have been used with

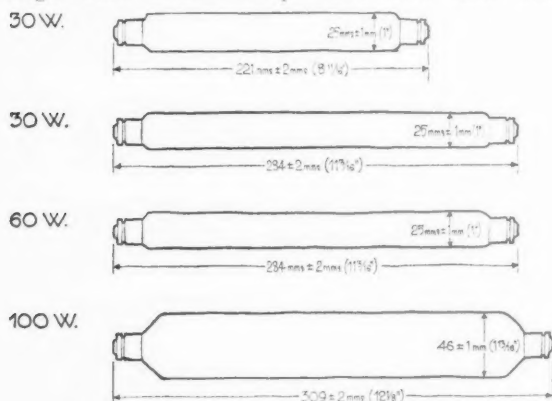


Fig. 6.—Sizes and types of double-ended tubular lamps

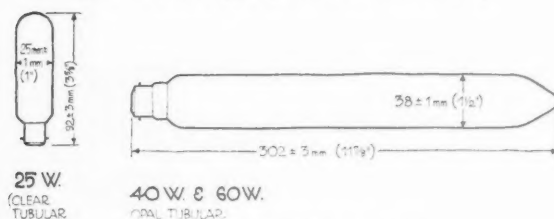


Fig. 7.—Single-ended tubular lamps

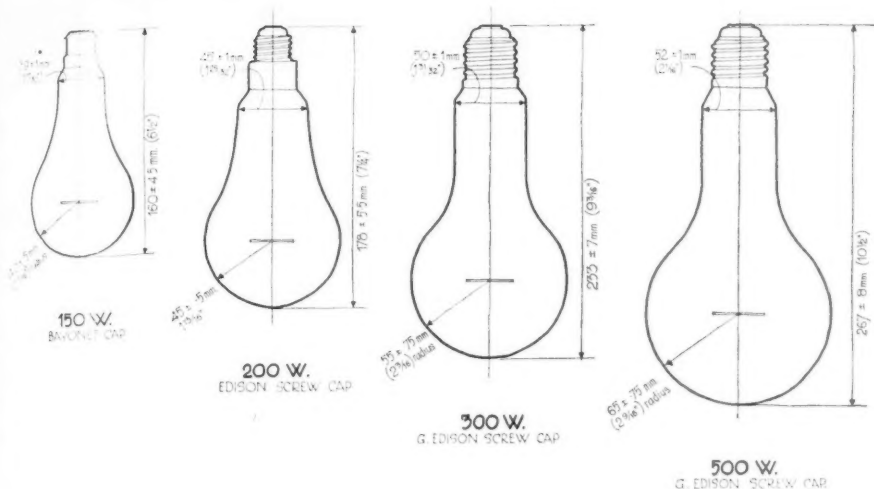
success in the form of suspended fittings. A good example of this use is to be seen in the Church of St. Thomas the Apostle, Hanwell. (See R.I.B.A. JOURNAL, 24 March 1934, page 527.)

It must be remembered with lamps of this type placed vertically, that the distribution of light is chiefly in the horizontal plane and little light is directed in the vertical plane, which suggests that wall surfaces should be of fairly high reflecting value, unless, of course, other additional systems of illumination are provided. Single- and double-ended tubular lamps are also used for show-cases, small internal signs or wherever space is limited.

GAS-FILLED LAMPS.—These have replaced vacuum lamps, other than tubular, owing to their greater luminous efficiency. The bulb is filled with an inert gas and the filament coiled into a spiral, thus giving a high filament temperature and a consequent increase in luminous output. (For details and sizes, see Fig. 8.) During the past year further developments have taken place. A lamp known as the "coiled-coil filament lamp" is now on the market, and owing to the double coil of the filament the light becomes more concentrated and much less affected by the cooling action of the gas in the bulb. Its heat is thus conserved and the result is a much

RELATIVE EFFICIENCIES IN LUMENS PER WATT (Approx. rating)										
(a) PROJECTOR LAMPS										
TYPE	WATTS	LUMENS PER WATT								
		5	10	15	20	25	30	35	40	LIFE IN HOURS
A.1.	100	100	100	100	100	100	100	100	100	100
	250	100	100	100	100	100	100	100	100	100
	500	100	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100	100
	1500	100	100	100	100	100	100	100	100	100
A.2.	100	100	100	100	100	100	100	100	100	100
	250	100	100	100	100	100	100	100	100	100
	500	100	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100	100
	1500	100	100	100	100	100	100	100	100	100
A.3.	100	100	100	100	100	100	100	100	100	100
	250	100	100	100	100	100	100	100	100	100
	500	100	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100	100
	1500	100	100	100	100	100	100	100	100	100
B.	100	100	100	100	100	100	100	100	100	100
	250	100	100	100	100	100	100	100	100	100
	500	100	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100	100
E.	100	100	100	100	100	100	100	100	100	100
	500	100	100	100	100	100	100	100	100	100

Efficiencies of standard projector lamps



CORRESPONDING DIMENSIONS

1000 W. G. EDISON SCREW CAP
OVERALL LENGTH: 300 ± 9 mm (11 3/4")
RADIUS OF BULB: 75 ± 7.5 mm (2 7/8")
DIAM. OF NECK: 55 ± 1 mm (2 1/8")

1500 W. G. EDISON SCREW CAP
OVERALL LENGTH: 350 ± 9 mm (13 3/4")
RADIUS OF BULB: 85 ± 7.5 mm (3 3/8")
DIAM. OF NECK: 60 ± 1 mm (2 3/8")

more efficient lamp. These are now made in 40 watt, 60 watt, 75 watt and 100 watt sizes, and have an increase of efficiency over the ordinary gas-filled lamp of 20 per cent., 15 per cent., 12 1/2 per cent. and 10 per cent. respectively. Clear lamps, except in certain cases, should always be used where reflecting equipment is employed, as the design of the reflector is such as to require the

direct light from the filament at an angle at which it can be re-directed, and if pearl or opal lamps are used the action of the reflector is to a great extent lost. Sometimes it has been found necessary, where certain harsh shadows have occurred, to introduce a pearl lamp into a reflector, resulting in an improvement to the lighting

RELATIVE EFFICIENCIES IN LUMENS PER WATT									
(1) FILAMENT LAMPS									
TYPE	WATTS	LUMENS PER WATT							
		5	10	15	20	25	30	35	40
VACUUM LAMPS									
		10	20	30	40	50	60	70	80
Clear Tubular (approx. rating) (single ended)	25								
Clear Tubular (approx. rating) (double ended)	30								
Opal (single ended) (approx. rating)	40								
Opal (double contact type) (approx. rating)	60								
Clear Pear Shaped (S.S.I. rating)	15								
Pearl Pear Shaped (S.S.I. rating)	25								
GAS-FILLED LAMPS									
Pear Shaped (S.S.I. rating)	40								
Clear & Pearl (S.S.I. rating)	60								
	75								
	100								
	150								
	200								
	300								
	500								
	750								
	1000								
	1500								

NOTE: For Opal Lamps an absorption factor of 7 1/2% to 8% must be applied to the gas filled tungsten filament lamps.

Comparative table of efficiencies of vacuum and gas-filled lamps

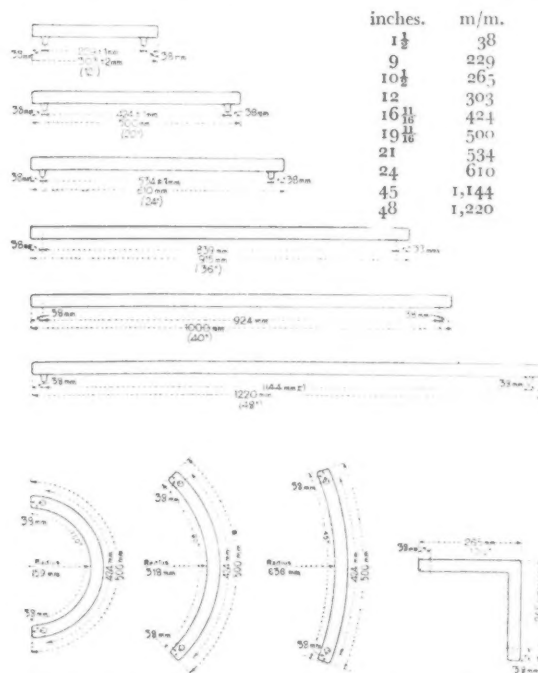


Fig. 8.—Types of side-contact tubular lamps (see also Fig. 1)

effect, the actual loss of light due to the change from clear to pearl being about $1\frac{1}{2}$ per cent. of the output of the clear lamp. The pearl lamp is almost universally employed in direct light fittings for industrial, domestic and decorative purposes, and in most cases when lamps are used behind glass panels. In the latter case this eliminates entirely the striation of the filament which would be apparent if clear lamps were used.

HIGH-PRESSURE MERCURY VAPOUR LAMPS.*—For some years lamp manufacturers have realised that there is an ultimate limit to the efficiency at which it is possible to manufacture the incandescent filament lamp, employing tungsten wire operating in an inert gas, owing to the operating temperature of the filament approaching the melting point of tungsten. In view of the fact that there is yet to be discovered a metal of higher melting-point and suitable electrical characteristics, research has been made in an entirely different direction, which has led to the development of lamps which employ an electrical discharge through a suitable gas or vapour to produce artificial lighting.

This lamp (Fig. 9) differs from the ordinary incandescent lamp in that it has no filament and is tubular in form instead of pear-shaped. It consists of two bulbs, one within the other. The inner tube is of hard glass to withstand the high temperature when in operation. At each end of this tube is an electrode, which is supplied with sufficient electronic emission to start an arc through the rare gas contained in the bulb, directly the lamp is connected to an alternating current supply. The mercury in the inner tube vapourises as soon as the discharge takes place and becomes luminous.

The light emitted by this lamp is deficient in red rays, but blues and greens are accentuated. This apparatus has been devoted up to the present time to the lighting of streets, open spaces and industrial buildings, and also in some cases to floodlighting.

The lamps are designed to operate only on alternating current, circuit voltages of 230/250. The lamps consume 400 and 250 watts respectively, a further 25 watts and 20 watts respectively being absorbed in the choke necessary for operating these lamps, and their initial light output is 400 watts=17,000 lumens; 250 watts=9,000 lumens.

The lamp is connected to the mains through a choke, especially designed for use with it. This choke is tapped for 230, 240 or 250 volts, and it is essential that connection is made to the tapping corresponding to the voltage of supply. It is imperative that the distance between the lamp and the choke is at least 3 feet, in order that interference due to the magnetic field set up by the former when in operation is avoided.

The overall dimensions are approximately 12 inches

by $2\frac{1}{2}$ inches, and it contains the standard G.E. cap as in the case of high wattage filament lamps.

On account of the peculiar characteristics of this lamp an entirely new technique in the design of reflectors is necessary to ensure maximum efficiency.

"SUNLIGHT" AND "DAYLIGHT" GASEOUS TUBE.—The Sunlight tube emits a light of golden peach colour, whilst the Daylight tube is a white light, similar to that obtained from a clouded north sky. Sunlight and Daylight tubes have no relation to the usual Neon tube, except in so far as all three work from high-tension electric supply and consist of glass tubing filled with gas. In Sunlight installations this gas is nitrogen, whereas in Daylight tubes carbon dioxide is used. With Sunlight or Daylight installations one transformer only is used, whereas a number would be required for a Neon installation of similar dimensions. Another distinction is that, whereas with Neon the equipment is complete before leaving the factory, Sunlight and Daylight tubes are joined together, exhausted and charged with gas actually on site.

It is well known that a Neon tube has a pair of electrodes for each section of glass, varying up to 20 feet in length. These electrodes form the means whereby a high-tension voltage from a transformer is applied to the tube to cause the gas to become luminous. Sunlight and Daylight tubes have also one pair of electrodes per length

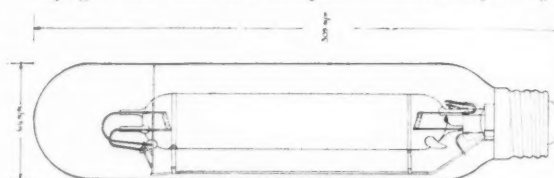


Fig. 9.—The high-pressure mercury vapour lamp

(many times that of the normal Neon section), but in addition they have automatic regenerative devices which take the form of gas generators and separators: as the pressure of the gas in the tube drops, the current increases and energises a coil on a valve, opening the plunger and admitting gas to the tube until the current drops to the minimum peak again. This operation is simple and entirely automatic.

It is desirable when using these tubes to have the electrodes as near to the transformer as possible, but in the event of a length where the electrodes are apart, high-tension cables are taken from the transformer to the electrodes; this inevitably increases the cost.

In the length of the tube the gas generator is connected either in the centre or near the electrodes, and therefore access should be provided so that the generator can be renewed. This applies to both the Sunlight and Daylight tubing.

The method of support for the Sunlight and Daylight tube is by means of a metal rod supporting a circular ring, through which the tube is threaded. Insulation is

* The following notes on High Pressure Mercury Vapour Lamps, Gaseous Tube, Neon, and Hot Cathode Lamps, are taken from notes by the author published in the *Architect and Building News* of 12 January 1934 and 11 January 1935, and are reproduced with some of the illustrations by permission of the Editor.

obtained, together with variations they expand the neon colour range to quite a considerable extent.

The designer must bear in mind that the visible efficiency of the superficially tinted tube is less than that of class (b) and immensely lower than the natural colour of class (a).

Neon Equipment and Design.—The above gives very briefly the various colours obtainable and the remaining notes will be devoted to the subject of lettering in sign-work.

When designing in this medium, there is necessarily a number of mechanical elements which must be taken into consideration.

They are as follows:—

(1) *Transformer.*—Since it is necessary to run the tubes at a higher voltage than is supplied by the mains, a transformer is used to raise the voltage to the required value. By reference to the table on page 761 it will be noticed that different voltages are required for various gases and variations in tube diameters.

As far as Middlesex is concerned, not more than 5,000 volts per transformer (2,500 volts to earth) is allowed unless a special permit is obtained from the authorities (this is necessary in the case of sunlight tubing). Surrey, however, allows 10,000 volts.

The transformer may either be placed outside the building (near the sign) or may be placed in the building. There are two standard sizes of transformer, namely, $8\frac{3}{4}$ inches long by $5\frac{3}{4}$ inches wide by 8 inches high, and $15\frac{1}{4}$ inches long by $8\frac{3}{4}$ inches wide by $13\frac{1}{2}$ inches high.

In the case of transformers used inside the building, it may be necessary to provide teak covers to them or other fire-resisting material authorised by the local authorities. It is important, however, to place the transformer as near to the neon tube as possible in order to reduce the length of high-tension cable.

(2) *Clips.*—Two standard forms of clip are used (see Fig. 10), and are introduced as supports for the tube.



Fig. 10.—The standard clip for Neon tubes

(3) *Fireman's switch.*—This is required by the fire brigade, for in the event of fire the tube can be switched off from the exterior of the building and so protect the fireman from coming into contact with the high-voltage

leads when climbing near signs in the course of his duties. Although it is customary, it is unnecessary to have the switch protruding from the surface of the building face. A recess in the building face may be arranged so that the switch box itself is concealed from view. It is essential, however, that the handle projects beyond the building face to enable the fireman to put the switch in an "off" position from below.

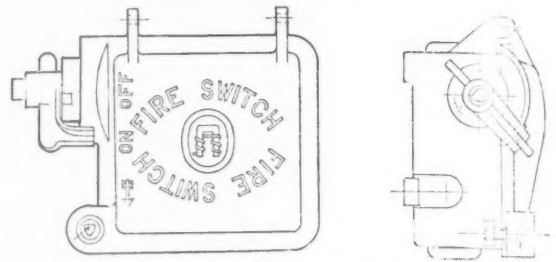


Fig. 11.—The locked switch for Neon tubes

(4) *Locked switch.*—In the I.E.E. Regulations, 807a, it states that "Each primary final sub-circuit supplying a luminous-discharge tube (neon tube) installation . . . shall be controlled by a locked switch arranged to open and close circuits on all poles. The switch shall be so controlled by a key that it cannot be put into the 'on' position until the key has been inserted and turned in the lock, and it shall not be possible to withdraw the key unless the switch is in an 'off' position. In addition the switch cover shall be so secured that it cannot be readily reopened without the use of a key or special tool." (Fig. 11.)

The reason for this is explained in a further clause, No. 807b, in which it states: "The off position of the switch specified in clause 'a' above shall be clearly marked and a conspicuous notice placed near the switch to the effect that the latter controls the luminous-discharge-tube installation and that it shall not be switched into the 'on' position until it has been established that no person or persons are working on or in the immediate neighbourhood of the luminous-discharge tube."

(5) *Porcelain holder.*—When letters consist of tube only, that is, with the building face as a background, provision can be made for the tubing in the structure of the building. In these cases a porcelain holder, Fig. 12, is provided and embedded in the face of the building. The high-voltage leads, instead of being visible, will be taken from the transformers inside the building to the holders. This allows the tube to be easily removed, as the tube ends (electrodes) fit straight into the holders, the tube itself being held in position by clips.

As regards the high-voltage wiring, there is no necessity to make special provision in the stone or brickwork, as the cables used by neon manufacturers will amply cover all question of fire risks.

There are two standard holders, as follows: (1) $1\frac{1}{2}$ inches diameter by $5\frac{3}{8}$ inches long. (2) $1\frac{9}{16}$ inches diameter by $3\frac{3}{8}$ inches long.

The former is indispensable when used to fix tubes to a building face, but owing to its length is not always convenient for use in letters, in which case the latter one is employed. The size of holder does not vary with the size of the tube used.

(6) *Rotary converter.*—Where the voltage supply is D.C., a rotary converter is required to convert the supply to A.C., which is necessary for the running of the tubes.

Voltages required for normal intensities.—The necessary voltages for a length of 10 feet of tube in various diameters and colours are as follows:—

	Volts
11 m/m. Red	1,985
11 m/m. Blue and green ..	1,196
11 m/m. Gold and white ..	3,830
15 m/m. Red	1,470
15 m/m. Blue and green ..	1,044
15 m/m. Gold and white ..	3,240
20 m/m. Red	1,110
20 m/m. Blue and green ..	860

The reason for giving the voltages in 10 feet lengths is that 10 feet of straight tubing or simple curves are convenient and practical from a transport point of view and it is desirable to use these lengths where possible.

The practical maximum operating lengths per transformer are as follows:—

	Feet
11 m/m. Red	25
11 m/m. Blue and green ..	40
11 m/m. Gold and white ..	13
15 m/m. Red	33
15 m/m. Blue and green ..	48
15 m/m. Gold and white ..	15
20 m/m. Red	41

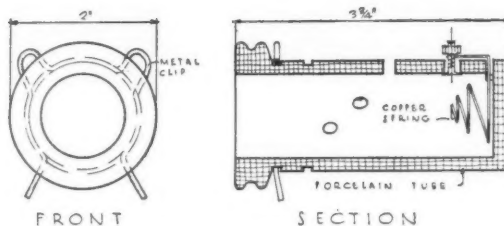


Fig. 12.—The porcelain holder for Neon tube

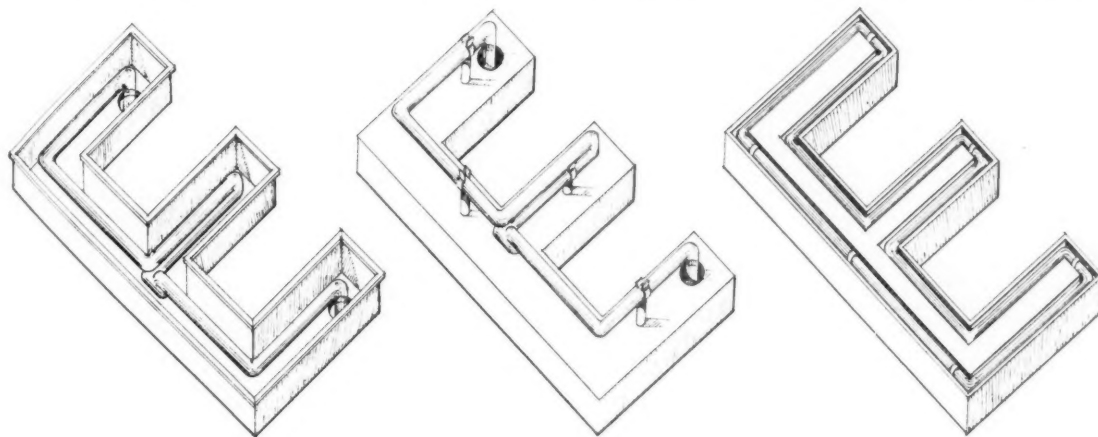
	Feet
20 m/m. Blue and green ..	57
20 m/m. Gold and white ..	17

With the use of such high voltages, the current consumption is relatively small, namely, about one-tenth of a corresponding length of striplight lamps.

Lettering.—Neon tubes may be used mounted directly upon the building face, providing the material is approved by the fire brigade. Generally speaking, the tubes, with the building surface as a background, will be practically invisible when not in use during the day. All normal building materials are considered satisfactory backgrounds. Soft woods should, however, be avoided, as the weather will twist the wood, which dislodges and often breaks the tubing. Neon tubes may have special backgrounds other than the building face. These should be either of metal, teak, or similar suitable fire-resisting material. These follow the line of the tubing so that the letters may be seen during daylight hours.

Special backgrounds.—Various types of special background are now in use: (1) Teak—(a) visible electrodes, (b) electrodes turned into teak. (2) Trough letter. (3) Inverted trough. (4) Cut-out background.

(1a) The electrodes in this case are turned back behind the tube itself, which enables the letters to be of a



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Neon letters.—Fig. 13 (left), a trough letter. Fig. 14 (centre), an inverted trough letter. Fig. 15 (right), a letter with cut-out background

shallow section. This method is not neat, however, and, generally speaking, is going out of practice.

(1*b*) Here the electrode is passed through the letter, a hole being prepared, and the tube when in position completely hides the electrode from view. The letter, however, has to be deeper. In the case of a fascia with space behind it the letter can be reduced in section accordingly. Each letter is a separate unit and is connected from electrode to electrode and thus connected to the transformer.

(2) Trough letter (Fig. 13). The open face of the letter is turned outwards, and the tube illuminates three sides. The effect is to increase the apparent width of the illuminant. The daylight appearance with the tube not in use is not, however, very pleasing.

(3) Inverted trough letter (Fig. 14). The ordinary trough letter is turned round so that a flat face is outwards. On this a tube is superimposed, either with the electrodes in the thickness of the letter or turned back on the tube. The daylight appearance in the former case is greatly superior to that of the trough letter.

(4) Cut-out background (Fig. 15). An inverted trough letter may have its front stencilled the width of the tube (the merits of recessing are indicated later). The tube in this case has to be inserted from the back, the electrodes being concealed in the trough and connected in the usual way.

Letters may be superimposed on a building face in various ways. They may be fixed to light iron rails, assembled on a panel or individually on lugs and made fast to the face of the building. This also applies to the other types of special background.

General information regarding the suitability of various types of lettering.—The great bulk of lettering to-day is done in 15 m/m. tubing, although 11 m/m. and 20 m/m. are used to some extent. The following sizes of letters for these three sizes of tubes are considered as minimum, although there are no hard and fast rules:—

11 m/m.	..	..	..	5 inch letter
15 m/m.	..	..	..	9 inch letter
20 m/m.	..	..	..	30 inch letter

There are no limitations to maximum size of letters, as by dividing them into suitable sections, letters of considerable size may be built up with any of the above diameter tubes. 30 m/m. tubing can be used, providing the letters are of sufficient size.

Visibility and legibility.—The many varieties have different degrees of legibility and visibility, and a few of the more important points are given below: (1) An

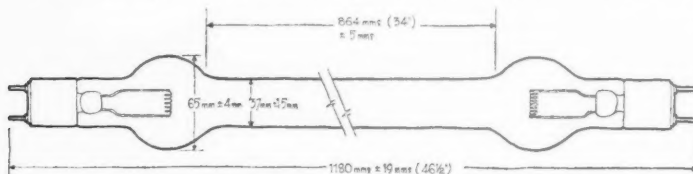


Fig. 16.—The coloured tubular hot-cathode lamp for floodlighting

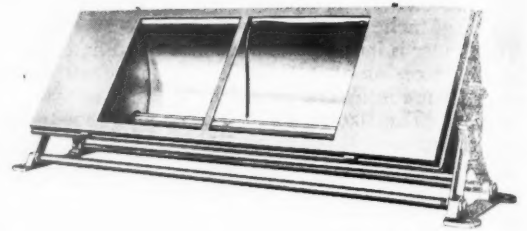


Photo lent by the G.E.C.

Fig. 17.—A G.E.C. floodlighting unit with the hot-cathode lamp

elongated letter is liable to be less legible than a block type (e.g., Gill Sans); (2) Recessed tubing is always more legible, even if less visible, than superimposed; (3) Double outline letters, in smaller sizes particularly, are less legible than single outline letters.

It is important to realise that the height at which the lettering is placed from the ground and the vertical angle at which the lettering is seen has a considerable effect on legibility. The following three factors should be borne in mind: (1) Block letters are more legible than script; (2) Single outline letters are more legible than double outline, except when letters, say, 6 feet or more high are used; (3) Recessing or troughing increases both legibility at a distance and angle of vision.

Colour has a very important bearing on visibility, and there are two considerations here: (1) The proportion of the total light output of the tube that falls within the visible spectrum; (2) The relative penetration power of different parts of the spectrum.

As regards (1), the spectrum of the neon red tube falls almost entirely within the limitations of human vision; hence the great efficiency as compared with other colours. In the blue tube, as known to date, a large proportion of the light emitted is beyond the limitations of vision and falls within the ultra-violet wavelength. The same applies naturally to green when a filter by means of coloured glass is used.

As regards (2), the absorption of monochromatic light is least at the infra-red end of the spectrum to a maximum at the ultra-violet. As the neon red tube is composed almost entirely of a narrow band of wavelengths in the extreme red and orange portion of the spectrum, its penetrating power is extremely high (hence its use for air beacons, etc.). The poorest colour from this point of view will obviously be blue. As regards pictorial design, the less detail there is, the greater the ease with which the design can be distinguished at a distance.

The surface brightness has an important bearing on legibility. At normal voltages the surface brightness is governed by the diameter of the tube. The larger the tube the lower the surface brightness. With every light source halation occurs, the degree of halation

depending on the distance the light source is from the eye and the brightness of the source. With light sources at great distances halation becomes very apparent, and to reduce this effect the brightness of the light source must be reduced.

The use of 9 m.m. or even 11 m.m. at a great distance may affect to some extent legibility, owing to halation caused by the brightness of the tube. It is advisable in such cases to employ 20 m.m., or even 30 m.m., to reduce the surface brightness of the tube.

A new form of Neon.—A recent entirely new development in "neon" has greatly increased the colour range. All the tubes are based upon the blue discharge and provide a range of 16 colours, which vary from red and brown through gold, yellow, green, blues, lavender and heliotrope to white and off-white. The colours are obtained by an internal coating of the tube acting as a light wavelength converter.

Greater scope is afforded to the designer owing to the large range of pastel colours. The fact that the tube has an internal coating of colour also makes it appear in daylight as a solid. The background, necessary to the ordinary neon, can, therefore, be dispensed with. It also gives an advantage from the practical point of view in reducing the complexity of the electrical elements. This is due to the fact that all the tubes have identical electrical characteristics. It is, therefore, possible to introduce complicated designs with far fewer transformers than would be required by the normal "neon" tubes. An interesting example was recently to be seen in the main feature at the east end of the main hall of Olympia at the last Ideal Home Exhibition.

COLOURED TUBULAR HOT CATHODE LAMPS FOR FLOODLIGHTING.—Fresh developments have taken place in the equipment for coloured floodlighting, and a new lamp has been developed, worked direct from the mains voltage of any A.C. system from 200 to 250 volts. These lamps are made in the form of glass tubes in which the luminous column is approximately 34 inches long (Fig. 16). They are available in four colours, red (furnished by neon gas), blue (main constituent mercury vapour), and two shades of green (fluorescent yellow glass may be adopted to change the colour of the latter from blue to green). The current consumption of the red lamps is approximately 470 watts, and of the green and blue lamps, 350 watts.

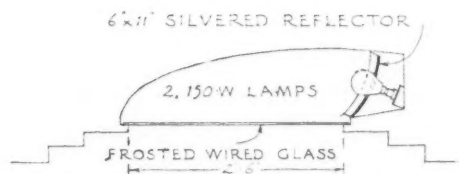


Fig. 19.—Shows how lamps can be placed when there is insufficient space behind the glass panel

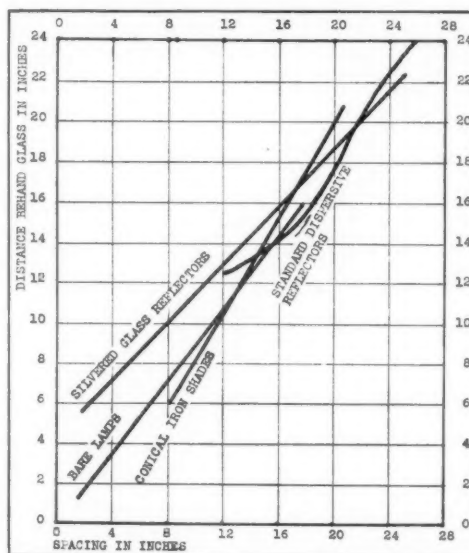


Fig. 18.—Tests showing how the spacing of bare lamps behind glass provides equal visual brightness over the glass surface

The main feature of these lamps is that the whole output is emitted in coloured light, therefore doing away with colour screens, which have a comparatively high absorption factor.

In order that satisfactory use may be made of this new form of light source, a reflector of mirrored glass trough of a suitable contour has been designed (Fig. 17). Heat resisting glass is used to enclose the unit, and brackets are provided to permit adjustment of the angle of tilt.

The floodlighting lamp requires a tesla coil, a filament transformer, and a choke for its control. The tesla coil and transformer are actually built in the floodlighting unit itself, but the choke can be placed in any suitable position between the floodlight and the main control board. The approximate spacing of the units is 4 : 1, while the relation of height covered by the units is 1 : 8.

GLASS

Many lighting installations employ diffusing glassware, illuminated by concealed lamps, with the intention of providing a light source of low brilliancy. The success of this is dependent upon the avoidance of an uneven effect upon the glass surface. The aim of obtaining an equal visual brightness may be achieved by spacing the lamps correctly behind the glass. Tests have been carried out recently by the Lighting Service Bureau on the spacing of bare lamps behind glass. (See Fig. 18.)

They, however, only show the results with lamps used directly behind flashed opal glass, whereas there are other methods by which a glass may be illuminated

evenly. For instance, where space is not available behind the panel, or it is desired to use as few lamps as possible to provide a luminous surface of a purely decorative nature, the placing of lamps directly behind the glass would result in an uneven or "spotty" effect. In these cases, the lamp or lamps may be concealed as shown in Fig. 19. This method allows another effect to be obtained, that is, by using cut or etched glass and allowing a certain amount of direct light to play upon the etched or cut portions. An example of this method is

to be seen in the illuminated window cills in the Henry Florence Hall at the R.I.B.A. building. (See also Fig. 26.)

A recent development in illuminating glassware was used in the staircase balustrading at the R.I.B.A. building. Here, by careful designing of the cutting and etching upon the glass surface and by arranging the lighting to illuminate through the edge or thickness of the glass, the whole of the design was brought into luminous relief, giving a pleasing effect.

SYSTEMS OF LIGHTING

It is not proposed in this article to enter into the scientific and technical aspects of lighting. Attention will be confined to the influence of lighting on architecture and to a consideration of lighting (with the design and disposition of its sources) as an element of architecture. The designer should realise that artificial lighting should be a factor of his design just as important as are doors, windows, walls, ceiling or floor.

Broadly speaking, there are three main systems of lighting: (1) Direct; (2) diffusing; (3) indirect.

Direct Lighting.—This system may be divided into two groups:

- (1) *Shielded Lamp.* (Controlled).
 - (a) Directional reflectors.
 - (b) Laylight with lamps behind diffusing glass.
- (2) *Exposed Lamp.* (Uncontrolled).
 - (a) Pear-shaped lamps.
 - (b) Tubular lamps.

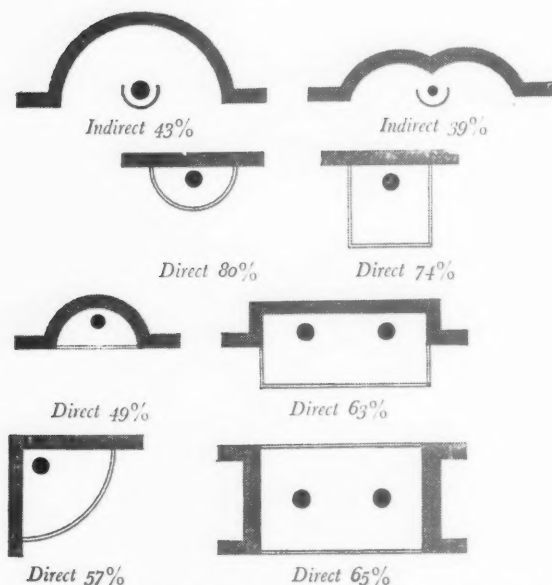


Fig. 20.—Diagram showing luminous efficiencies of light panels

1. *Shielded or controlled direct lighting* is characterised by the fact that the greater part of the light is directed downward on the horizontal plane. It may be in the form of open reflectors of opaque material, or by means of flush ceiling or wall panels. The most efficient form of direct lighting is the use of open reflectors where no interference of the direct light rays is made by the introduction of diffusing glassware. Direct lighting panels, when flush with the ceiling or walls, are less efficient, but provide a characteristic diffused illumination. Fig. 20 shows the relative efficiencies of direct lighting panels.

2. *Ordinary bare lamps arranged in clusters* are sometimes used, but this method requires that the lamps be placed somewhere out of the range of vision, so as to avoid excessive brightness of the exposed lamp. That this method cannot be controlled gives it a limited scope of application.

With the tubular incandescent lamp, the most successful examples of use are with the opalescent type, since their brightness is not excessive. A number of these lamps can be grouped to form decorative designs, or to emphasise vertical or horizontal lines. This is expensive, but nevertheless, their use in this country is increasing.

Diffusing.—Diffusing systems of lighting are used where a greater degree of diffusion is required than is obtainable with direct lighting or where it is desired to reduce the glare experienced with open reflectors. This type consists of diffusing globes or panels projecting below the ceiling surface, or any fitting where a certain amount of light is allowed to go in an upward and sideways direction illuminating the ceilings and walls. This arrangement will help to reduce considerably the shadows experienced with the direct system.

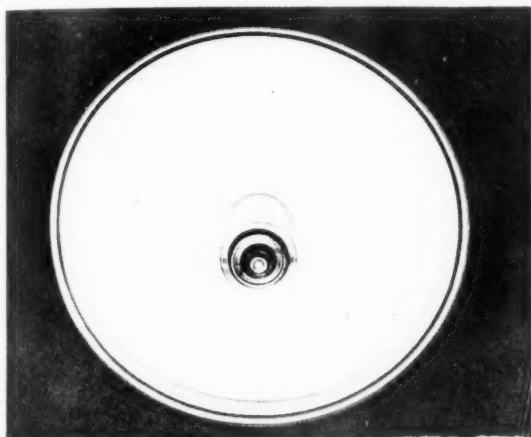
Indirect System.—This applies to any lighting where the light source is concealed from view and where all the light is directed by means of reflectors towards the ceilings or walls, reflections from these surfaces reaching the "plane of work." The concealment may be effected by means of movable fixtures, suspended fittings from the ceiling, brackets from the wall or, as in many cases, housing in the structure of the building. In the latter case, a great deal of forethought is required during the early stages of the design; to ensure that the lighting will be

successfully achieved and economically designed it should be planned in co-operation with a lighting expert.

LIGHTING SYSTEMS IN ARCHITECTURE

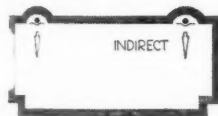
Direct lighting is generally used where an efficient system of lighting is required and the maximum illumination is to be upon the "plane of work." This system of lighting in its simplest form is used in factories, shop windows, mines, railway yards and the like. The degree of uniformity of illumination or the amount of shadows required is dependent upon the spacing and arrangement of the lighting units, this being governed by the particular kind of work which is to be illuminated. This system is naturally not confined to the problems mentioned above, but is employed in many buildings, often in a more complicated form; in most cases it is used in conjunction with other systems of lighting. The direct units are usually placed behind diffusing or decorative glass.

Diffused Lighting.—The best example is the ordinary



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Fig. 22 (above).—One of the dome lights in the R.I.B.A. Entrance Hall, and Fig. 23 (right), a general view. The small section on the left shows the position of the lights, which give the greatest brightness on the walls



diffusing globe. Broadly speaking, its use is generally confined to schools, hospitals, stations and in buildings where the question of economy is of importance. It must be appreciated that the above remarks do not prevent these systems being used in buildings other than those mentioned. An interesting example of the use of globe fittings employed decoratively is seen in the Skandia Theatre in Stockholm. (Fig. 21.) In most cases such as the lighting of public buildings and places of entertainment it is found that not only are all or some of these systems employed together, but such combinations are often desirable.

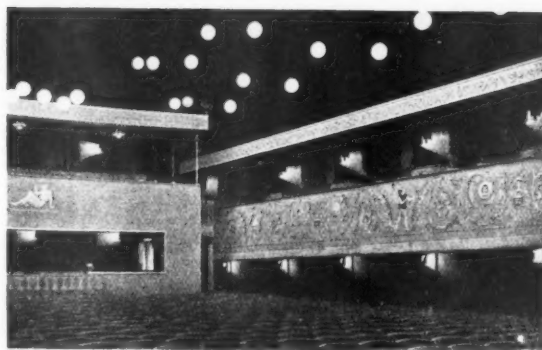


Fig. 21.—In the Skandia Cinema, Stockholm, simple globe fittings provide an interesting decoration and an economical lighting system. From "Modern Theatres and Cinemas," by P. Morton Shand

Indirect Lighting.—Indirect lighting is the one which demands the most care in design, and is, perhaps, the most interesting of all systems from the point of view of the designer. It is often held that where indirect lighting covers the whole surface of a ceiling that it tends to produce a dull effect and to make the interiors appear shapeless; consequently that direct light sources could well be introduced as well to give more vitality. With most types of interiors this fact is true, but there are exceptions such as libraries or lecture theatres which are well suited for this system of lighting. In other interiors this difficulty can be overcome by confining the indirect lighting to definite areas, these areas being a good deal less than the total area of the ceiling. The lighting will then assume a more directional character, at the same

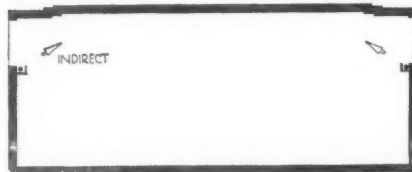


Fig. 24.—Section of indirect lighting in the R.I.B.A. Meeting Room





Fig. 25.—Liverpool College Chapel. Architects: Leathart and Granger [FF.]. The interior by day and night. The cornice or trough at the top of the dado gives easy access and economical light distribution

time providing the soft and pleasing quality which indirect lighting can give. Indirect lighting gives the designer greater scope in the treatment of the ceiling itself. Figs. 22 and 23 show an example of this treatment where the domed surface is designed to distribute the light over the interior.

CORNICES AND TROUGHS

In deciding the position of a cornice which is designed to take reflectors for the purpose of illuminating the ceiling or a portion of the ceiling, great care must be

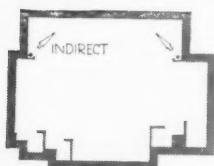
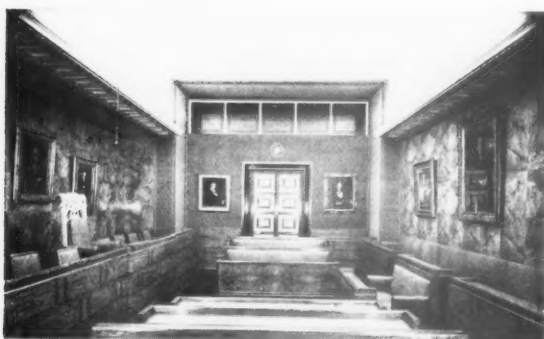
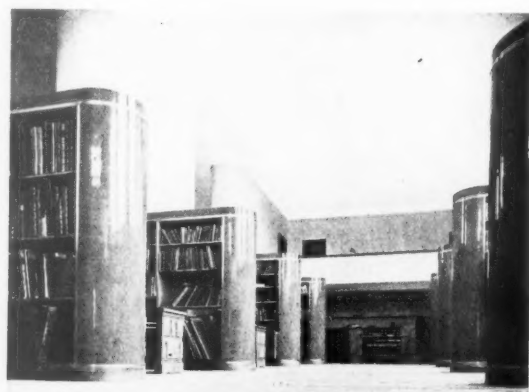
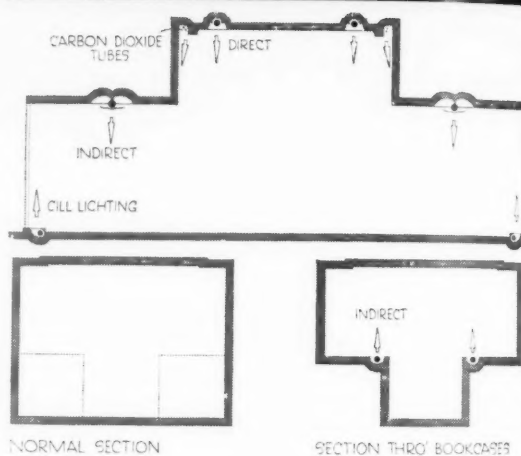
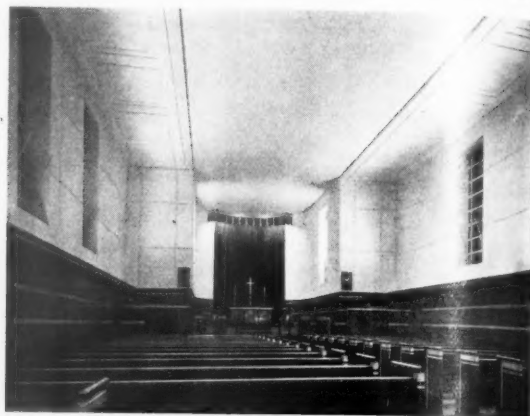


Fig. 26 (above on right).—Section of the R.I.B.A. Henry Florence Hall, showing the position of the lighting which gives a flexible system in accordance with the various uses of the room



Section and view of the R.I.B.A. Council Chamber, in which careful placing of troughs gives good distribution of light, and allows wide spacing of lamps, which results in economical current consumption



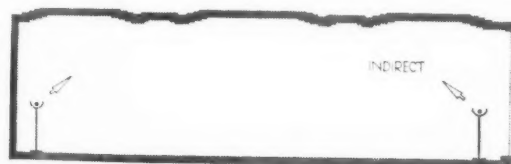
Sections and view of the R.I.B.A. Library. The indirect lighting units are housed in the tops of the bookcases, and give sufficient intensity to ensure a good reading light and legibility of the titles on the shelves

taken to ensure that it is placed so that the lighting does not give an impression of the room being cut in half. This often occurs when the ceiling colour is brought down the side walls to finish level with the cornice and the wall below is in a darker material. This can be avoided by carrying the same wall colour up to the ceiling level or, as in the case of the Meeting Room at the R.I.B.A. (Fig. 24), the use of discontinuous trough enabling the wall material to be carried up between. Another alternative is the treatment employed at Liverpool College Chapel (Fig. 25), where the wall above the cornice was of sufficient dimensions to provide a good proportion between the lightness of the wall and the darker material of the dado.

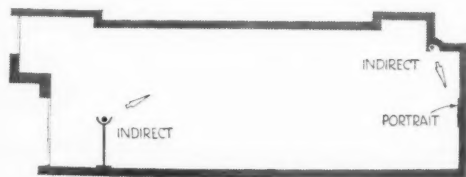
The type of reflecting equipment will have considerable effect upon the size and placing of the cornice or trough. For instance, with a certain type of reflector the cornice or trough may be as near to the ceiling as one-tenth the span of the room. This particular type of reflector gives a controlled narrow beam, and this proportion is about the closest that a cornice can be reasonably arranged in relation to the ceiling.

FLOOR TORCHERES

This form of lighting by means of containers supported from the floor, is useful in many types of interiors. The idea is not a new one. Its main advantage is that the light source is a long way from the ceiling, providing an excellent position from which the light may be both easily and economically distributed; owing to the convenience of cleaning, maintenance costs are considerably reduced. When using torcheres of this kind the most pleasing effect is obtained when the container is made very slightly luminous. This adds to the lighting effect of the interior and gives added vitality to the indirect lighting. If these containers are not made luminous (this



LONGITUDINAL SECTION

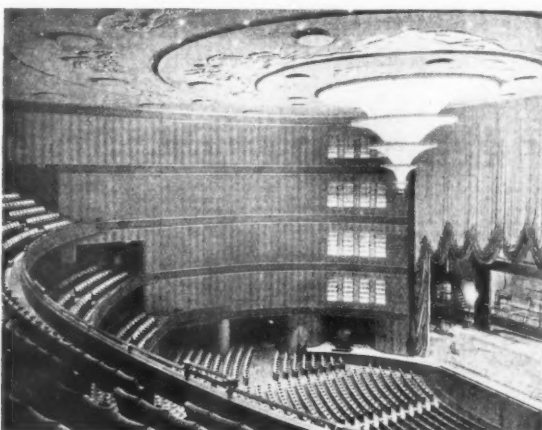


LONGITUDINAL SECTION

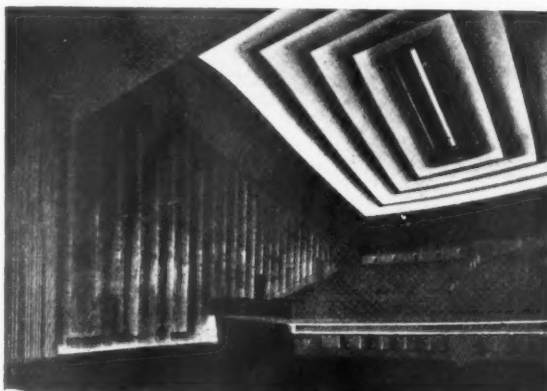
Fig. 27.—The use of floor torcheres. Below, the R.I.B.A. Meeting Room Foyer, mainly lit from one end. Above, the R.I.B.A. Reception Room lit by pairs of torcheres at each end



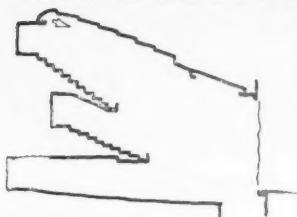
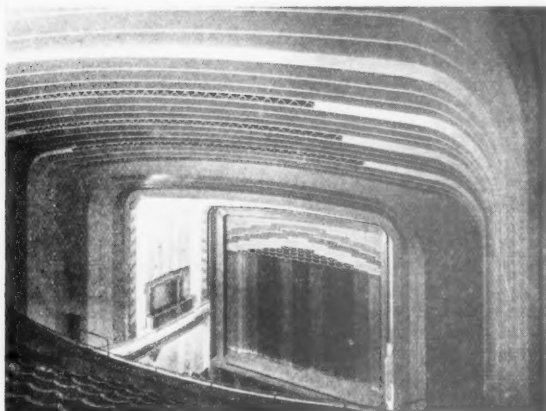
Point lighting in a theatre. Flush panels give the appearance of stars in the sky



A central ceiling point can often provide the lighting in theatres having flat ceilings

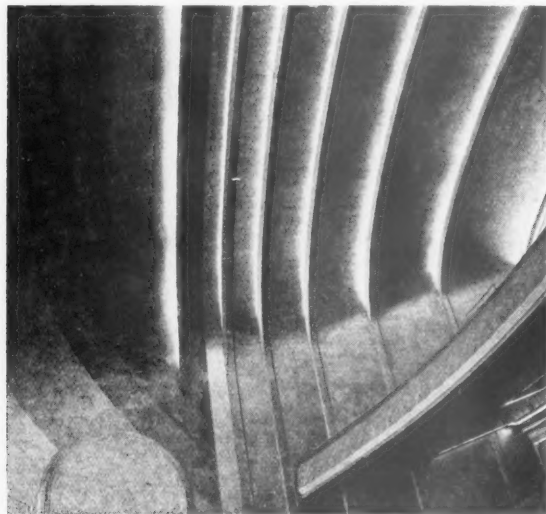


The Lichtburg Theatre, Berlin. There is no directional emphasis towards the proscenium. This is probably better in small theatres than a more dramatic cross-sectional or horizontal treatment

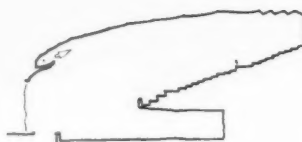
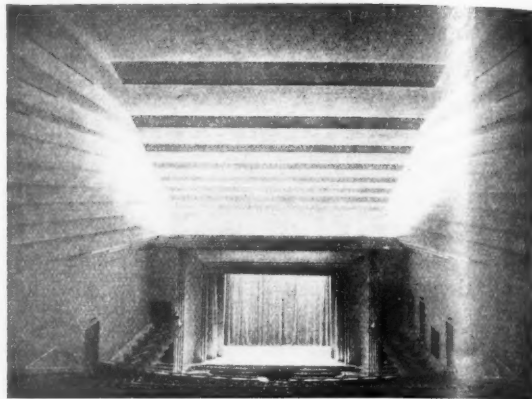


The Saville Theatre. Architects: T. P. Bennett and Son [FF.]. An example of auditorium lighting from the back, the ceiling being arranged to receive the light and so emphasise the cross-sectional form of the interior

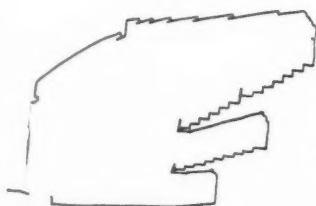
depending upon the interior), other sources may be introduced providing a certain degree of diffused directional light.



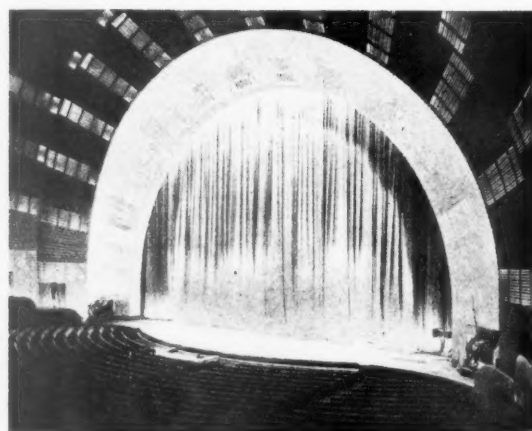
The Cambridge Theatre. Architects: Wimperis, Simpson and Guthrie [FF.] and S. Chermayeff [F.]. The cross-sectional effect is obtained by the stepped slots housing lines of lamps. Care must be taken with ceiling slots that they do not upset the acoustic design

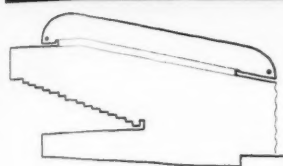
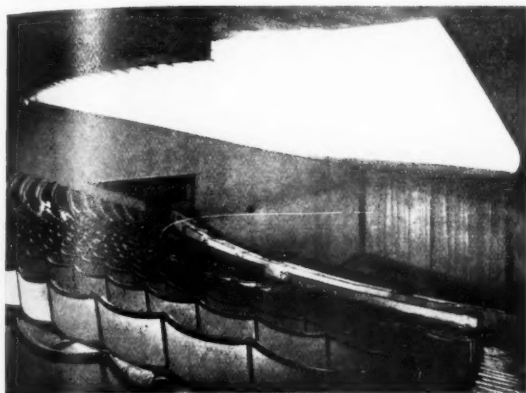


The Capitol, Berlin. Architects: F. Witmer and Hans Weiss. An example of lighting from the front of the auditorium, the lights being over the proscenium. This method demands adequate throw over the ceiling, and the lights must not be visible from the balcony



Radio City Music Hall. A strongly-lit proscenium arch, the lights being concealed behind the projecting arched bands of the roof. The illuminated arched bands focus attention on the stage



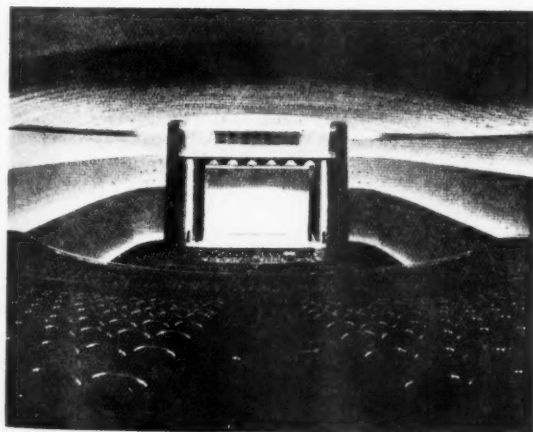


A simple form of "atmospheric" treatment giving the appearance of an open-air theatre. Indirect lighting, evenly distributed, will give this effect

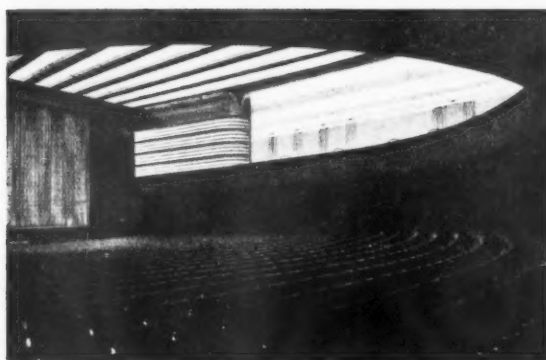
An interesting use of torcheres is that employed in the Meeting Room Foyer of the R.I.B.A. building, where the light source is arranged to come from one end only (Fig. 27). This method gives an effect of direction which is, in this case, suitable for the particular interior. Torchères are also used in the Reception Room.

SLOTS LIGHTING WALLS

As the indirect lighting of ceilings will tend to give a sense of greater height to the interior so will the lighting of walls tend to give the interior a greater sense of width. The method of lighting walls has, naturally, many variations—from the concealment of the lighting source above the wall surface to the placing of fittings or panels in

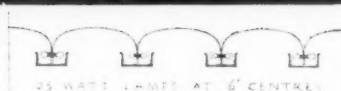


A strong horizontal treatment gives great emphasis to the proscenium



The Universum, Berlin. Architect: Erich Mendelsohn. A dramatic horizontal

expression in light, in sympathy with the architectural form. The section is a detail of the ceiling light construction



which the majority of light illuminates the wall. The general effect is practically the same. In the first case the light source is not visible and does not play very much part in the decorative effect of the ceiling, but in the latter case the fitting is a definite part of the ceiling design. Two such examples are to be seen in the R.I.B.A. building, where in the Henry Florence Hall the use of a continuous carbon-dioxide tube, partially concealed in a specially prepared slot in the ceiling, illuminates the wall between the main ceiling and the lower, secondary ceiling (Fig. 26). The effect of this is to give an impression that the main ceiling is floating and separate from the strong bands of luminous wall.



The Curzon Cinema. Architects: Sir John Burnet, Tait and Lorne [FF.]. Lighting may provide the only decoration if surfaces suitable to receive light are provided. Colour may be used and, if colour mixing is required, dimmers must be used

In the Entrance Hall at the R.I.B.A. fittings in the form of small domes were placed in the ceiling near the walls. These, besides illuminating the walls, produce an effect of greater width in the interior and also emphasise the contrast between this space and the vertical staircase well, which, incidentally, is lit directly to heighten the contrast.

It will be apparent that the placing of light is of great importance, and that success or failure is based solely upon the relationship of light to space.

CALCULATED UNEVENNESS

The most pleasing effect is obtained when the illumination of surfaces is even over the field of view ; many



Fig. 28.—Ceiling of the Main Staircase in the R.I.B.A. building. "Calculated unevenness is exemplified by the use of bulbs distributed over the ceiling in lighted panels or coffers"

lighting installations suffer from lack of consideration of this point. This does not mean, however, that calculated unevenness is not desirable, that is, the emphasis of certain features to a higher intensity. For example, in a church the nave can be provided with a suffused light sufficient for the reading of the service: the chancel may have a higher intensity so that the order of the service may be read or sung by the clergy, the greatest emphasis



Fig. 29.—The Sheen Cinema. Architects: Leathart and Granger [FF.]. The façade was designed with special attention to the night effect. The modelling is given its full value and is not flattened out by "flood-lighting."

and highest intensity being upon the altar. The different parts of the building are, by this, properly related to one another and readily appreciated by the spectator.

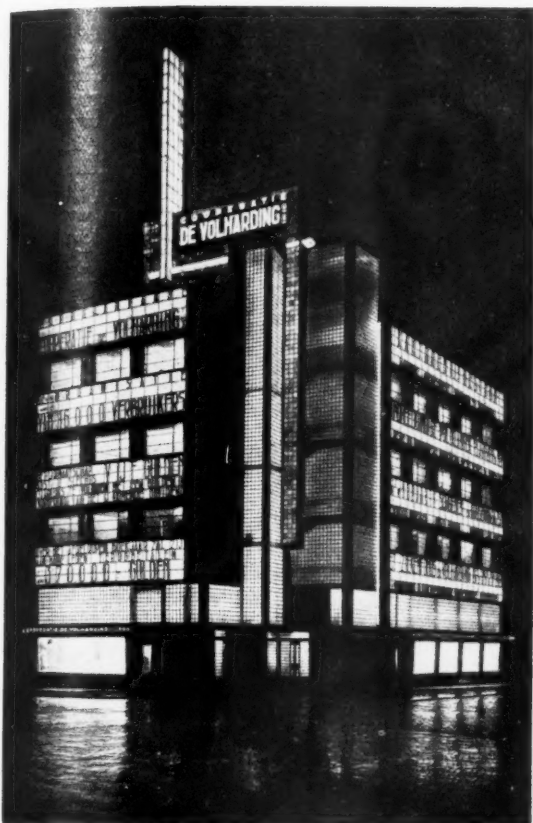
This calculated unevenness is exemplified by the use of bulbs distributed over the ceiling in lighting panels or coffers. The ceiling may be brought into effective symmetrical relief by such an arrangement; this would not be obtainable by any other method. There is no doubt that more satisfactory results are usually obtained where the light is recessed into a coffer rather than with flush panels on the ceiling surface. The ceiling of the Main Staircase of the R.I.B.A. building is an example of this treatment except that, in this case, the bulb itself is not visible but is placed behind diffusing glassware (Fig. 28.)



In the R.I.B.A. Aston Webb Memorial Room four carefully designed indirect pendant fittings give adequate light for the work of committees

ACCESS

One of the chief factors in the choice of a lighting system for the interior of a building is the ease with



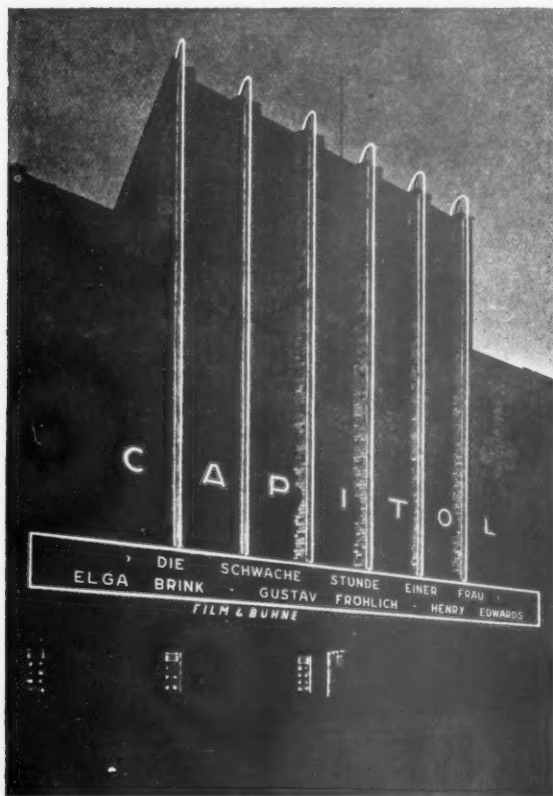
Above, the Vol Harding Building, The Hague. Below, the Conditorei Café, Berlin. External luminous surfaces can provide a good form of external lighting. Unlike floodlighting, it is dependent on the form of the light sources and their relation to the non-luminous surfaces



Fig. 30.—A building in Berlin by Luckhardt and Anker in which the horizontal bands of wall below the continuous windows are emphasised by lighting from troughs below



which the installation is accessible for re-lamping and cleaning. It is, therefore, important to examine very carefully the positions in which the lighting is to be placed. Good access is more difficult to achieve in rooms of large dimensions which may be from 20 to 40 feet high. In such cases, if lighting is to be arranged on the ceiling, traps in the floor above should be provided, or if suspended fittings of large dimensions are employed, a winch is desirable so that the fitting may be lowered for cleaning purposes. In the case of the high ceiling in the Henry Florence Hall and staircase of the R.I.B.A. building, provision was made in the form of traps at the Library floor level. Access to the fittings



The Capitol, Breslau. Architect: Friedrich Lipp. A good example of the use of gaseous tubes for horizontal and vertical emphasis

in the lower ceilings of the Henry Florence Hall is effected by tower steps. The use of torchères in the Meeting Room Foyer was partly brought about by the difficulty of providing access traps in the floor above.

Access to panels of glass in the ceiling is probably more practicable when effected from below, as it enables the easy removal of dirt. This, however, can only be conveniently arranged on comparatively low ceilings. There is no doubt that the use of high ladders is risky, as well as likely to add to maintenance expense.

VENTILATION

The use of recessed panels and similar lighting features results in an excessive depreciation of light output due to internal settlement of dust, and if ventilation can be safely avoided the installation will be more serviceable.

The majority of wall and ceiling panels of the built-in type can be totally enclosed without causing undue temperature rise, since the heat is effectively radiated by the relatively large glass area. It is important to arrange for adequate clearance between the bulb and

any combustible material in the installation, and in many cases the use of asbestos is advisable or some form of insulation which will prevent the combustible materials being effected. To prevent the entry of dirt and dust when the actual unit is in the process of cooling after the light has been on—the tendency of which is to suck in air—chamois leather, putty, felt or copper glazing is often used to seal the joint between the glass and the metal.

It is advisable, where possible, to arrange the ventilating system so that the clean air passes over the lighting installation and is extracted at a low level from the room. In the Meeting Room at the R.I.B.A. the reflectors are in front of the inlet, which passes the clean air continuously over the reflectors; this is also the case in the Council Chamber.

EXTERIOR LIGHTING

Much has been talked of so-called "floodlighting"; at the outset it should be said that no building should be floodlit in the way which the term "floodlighting" is usually taken to connote; that is, the whole of the building being flooded to an even intensity to give an appearance of daylight. Many buildings are literally "floodlit" with disastrous results. If a building is to have a successful night appearance when lighted, it must be designed to receive the light and adequate room made in the façade to house the floodlighting units. Many



Fig. 31.—The exterior lighting of the R.I.B.A. building is a radical departure from the flat effects of so-called "floodlighting." The façade is "rendered" to give shadow value and modelling

installations suffer from the lack of consideration of this question of concealment of units.

How to conceal the floodlighting units will depend largely upon the type of building. The R.I.B.A. building, for instance, with its fairly flat façade, enabled the units to be placed on the pavement in front of the building underneath glass panels (Fig. 31). This method has several merits and could well be generally adopted for lighting exteriors. In some cases, as in the Sheen Cinema, the housing of the reflectors was arranged in the projecting canopy (Fig. 29).

Projecting brackets upon the face of the building provide a suitable position for the housing of reflectors, but owing to the reflectors being near the surface to be lit they have to be specially designed; the modelling of the building face has also to be carefully considered to provide the necessary amount of light and shade.

The practice of concentrating floodlighting on the attic or upper part of a building where architectural interest is not, as a general rule, justified does not show exterior lighting to its best advantage. Attic storeys during the day are rarely seen, and it is doubtful whether the eye interest should be raised so high above the street level except, perhaps, where a building is an island site and a good distant view is obtained.

From the point of view of the street effect no doubt the most successful form of lighting is where the luminous surfaces are kept at a low level and, if possible, the main lines of the building stressed (Fig. 30).

The use of gas for floodlighting should not be overlooked. It is particularly suited to the illumination of gardens or foliage, as it tends to reveal the natural colours. In many cases, moreover, it may be cheaper in running cost than lighting by electricity.



The use of floodlighting on natural formations. "St. Paul's," in Gough's Great Cave at Cheddar

In this article, examples have been taken where possible from the R.I.B.A. building. This has been done partly because the building contains a great variety of different methods of lighting, but chiefly because readers will be able themselves to study the effects obtained. It should be emphasised that no amount of description will be an effective substitute for actual

study of examples. Since the author was responsible, in collaboration with the architect, Mr. G. Grey Wormum, for the design of the lighting, it has been possible in this article to describe the intentions, limiting factors and methods of each type of lighting, and the reader will be able to judge results for himself.

The Harmony of the Spheres

BY HENRY M. FLETCHER, M.A., F.R.I.B.A.

Annales du Musée is "a collection of line engravings after the principal works of painting, sculpture or architectural design which have won annual prizes whether at special schools or in national competitions; productions of Artists in all branches of Art which at various exhibitions have received honourable notice; specimens from the Gallery of Painting, chosen either for their reputation or as being still unpublished; the complete series from the Gallery of Antiques; buildings ancient and modern, etc."* The work is dated 1815 and was published in Paris. It is in twenty-one octavo volumes, edited by C. P. Landon, a painter with an imposing list of qualifications. The greater part of it consists of outline engravings from French and Italian paintings of the seventeenth and eighteenth centuries, many of them probably collected by Napoleon in the course of his conquests. These are interspersed with a few designs by French architects of the day, Percier and Fontaine, Chalgrin, Ledoux, Normand and others. The style in general, as may be supposed, is a severe and elegant classic. Some, like the Hôtel de Salm, now the Palais de la Légion d'Honneur, and Ledoux's Barriers at the entrances of Paris, were carried into execution; others, like the two designs here reproduced, were not. These seem to be curious enough and characteristic enough of their period to be worth extracting from the Annals of

the Museum, with a translation of Landon's equally characteristic letterpress.

A. L. T. Vaudoyer was born in Paris in 1756. He was rather an administrative than a creative architect. It was greatly due to his energy that the course of architectural education in Paris was almost uninterrupted by the Revolution. He lived to the age of ninety, and acted as Secretary to the Institute of France until he had long passed eighty. His description in the text as "architect to the Palais des Arts" refers to his best-known work, the adaptation of the Collège des Quatre Nations, Le Vau's building on the left bank of the Seine, for the Institute.

Sobre was born in Paris about 1760, and died there in 1815. His principal works were the Théâtre des Jeunes Artistes, and, with Happe, the Maison Batave in the Rue St. Denis. Both these buildings have long disappeared.

* * *

HOUSE OF A COSMOPOLITE†

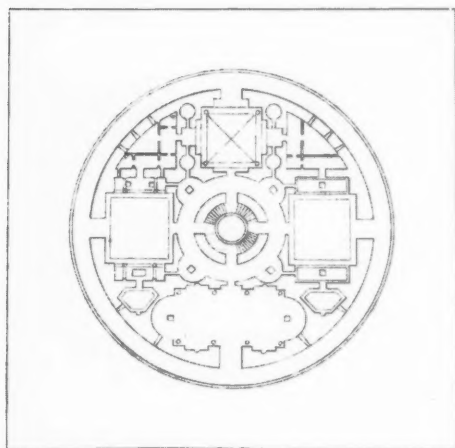
BY M. VAUDOYER

‡ This little design is taken from the album of an amateur for whom it was improvised at Rome in 1785 by M. Vaudoyer, then a scholar at the Academy of France, and at the present time architect to the Palais des Arts.

It is well known that many travellers carry with them a white book (hence called *album*), in which they collect autographical souvenirs of all kinds from men of learning, musicians, poets, artists and all such persons as inspire them with feelings of esteem or affection, and whose company they have occasion to frequent in the course of their travels.

The origin of this design is as follows:—The Citizen Debracq, owner of the album in question, being interrogated as to his nationality, replied that he recognised no one country in particular; that the pleasures of travel made him regard the entire world as his domain, in a word that he was A COSMOPOLITE.

The artist, to avoid a repetition of the temples of Honour, of Virtue, of the Muses, of Friendship, etc., with which several architects had already decorated the album of our amateur, designed for him a house

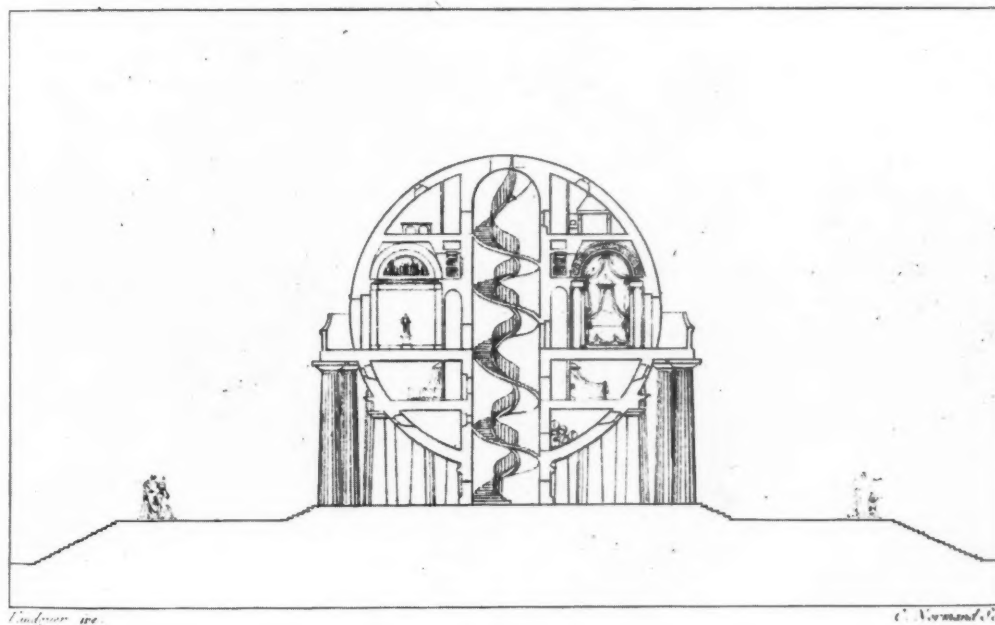
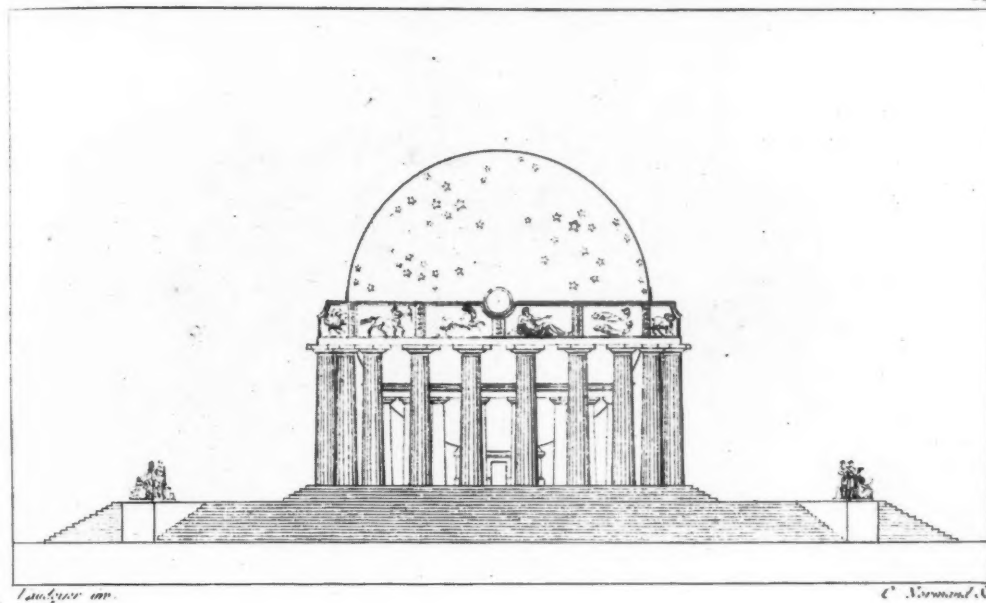


PLAN OF THE HOUSE OF A COSMOPOLITE
Designed for Citizen Debracq by M. Vaudoyer in 1785

* Translated from the title page.

† *Annales de Musée*. II. 127.

‡ Translated from the French text.



HOUSE OF A COSMOPOLITE
Above: Elevation
Below: Section showing central stair

appropriate to the character which he had arrogated to himself.

The house is composed of an isolated sphere, half terrestrial, half celestial; at the cardinal points four large principal chambers, each lighted by a large arched window, are combined with passages into a highly commodious disposition; the access is by a central staircase giving on to a wide corridor which affords an easy means of intercommunication.

This principal floor consists of an antechamber, an eating room, a withdrawing room or gallery, a bed-chamber and closets.

Small storeys above and below, lighted by star-shaped apertures, are assigned to the domestics, the kitchen and other offices.

A grand order, with a band of the signs of the Zodiac by way of entablature, and a lesser order form the exterior decoration of the composition; the diminutive scale of the edifice and the logical distribution of the points of support greatly facilitate its execution; the floors (as may be perceived from the section), which take their bearing on the central wall and on the columns, tie the whole construction together in a solid manner.

We have no doubt that this little design, if executed in a garden, must produce an exceedingly picturesque effect; it is not great architecture, but rather what, in the realm of poetry, would be designated a madrigal, and it is notorious that persons of distinguished talent have on occasion permitted themselves this kind of recreation.

DESIGN FOR A TEMPLE OF IMMORTALITY* CONSECRATED TO GREAT MEN

TO BE BUILT IN THE ELYSIAN FIELDS†

By M. SOBRE, ARCHITECT

The diameter of the Monument to be 80 metres

The author bases the form of this temple on that of the terrestrial globe, symbolising to Man the vast and imposing truth of Immortality.

While it would be pedantic to tie the architect who improvises an imaginary House for a Cosmopolite to the exactness of a working drawing, it is interesting to attempt some estimate of the size of his sphere. On the assumption that the domestics' bedrooms, shown with canopied hangings beneath the principal rooms, are 8 feet high, the diameter of the globe would be 60 feet, and the total height, exclusive of the monumental flights of steps, about 68 feet, while the diameter

He assumes it to be set in the midst of a lake of such extent that the hemisphere, on being reflected in it, would present to the beholder the image of a complete globe.

The circumference is divided equally between the twelve signs of the Zodiac, and beneath each of these signs is a subject in low relief representing the products of the earth.

The geographical map engraved on the globe, while it invests the monument with its appropriate character, at the same time offers to the spectator a medium of instruction in a science as useful as it is agreeable.

At the summit of the sphere is the temple of Immortality in the shape of a colonnade of lapis marble, with allegorical ornaments in gilded bronze.

Access to the interior is at the four cardinal points; the doors are of bronze, surmounted by a cornice and pediment carried on marble columns of the Corinthian order.

Arrived within the edifice, the worshipper traverses a vast gallery decorated with pedestals bearing the statues of celebrated men, and above these statues are civic crowns and inscriptions to remind posterity of their deeds.

Below ground level is another gallery composed of colonnades of a Grecian order, with niches adorned by sepulchral urns, in which are deposited the ashes of the illustrious.

This gallery communicates with the sanctuary, the area of which is determined by an amphitheatre so vast as to contain an immense number of spectators. In the midst of the sanctuary is a white marble altar adorned with garlands of flowers and fruit in gilded bronze, and flanked by four antique tripods for burning incense on the occasion of ceremonies to be held in the edifice as homage to the great men and the Eternal Being.

The vault of the structure represents the celestial vault. It receives light at the summit through a circular aperture large enough to reveal a view of the colonnade of the exterior temple; and the border of this aperture is formed by a crown of stars, symbolising Immortality.

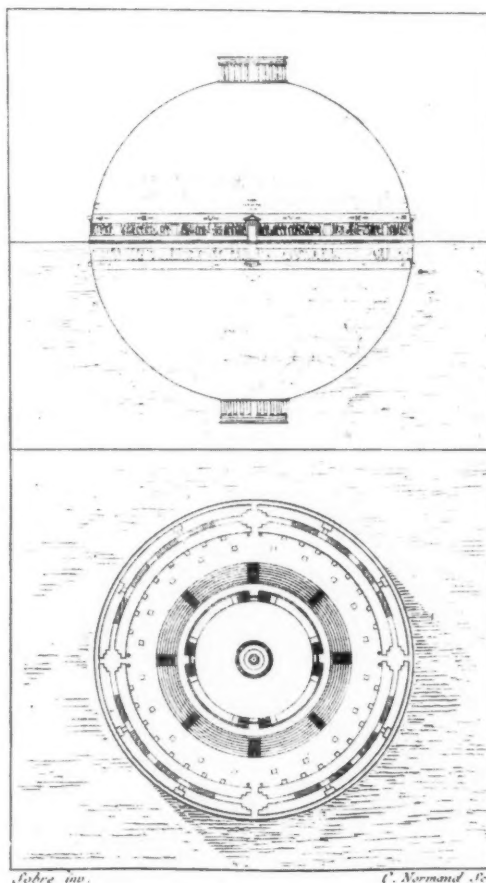
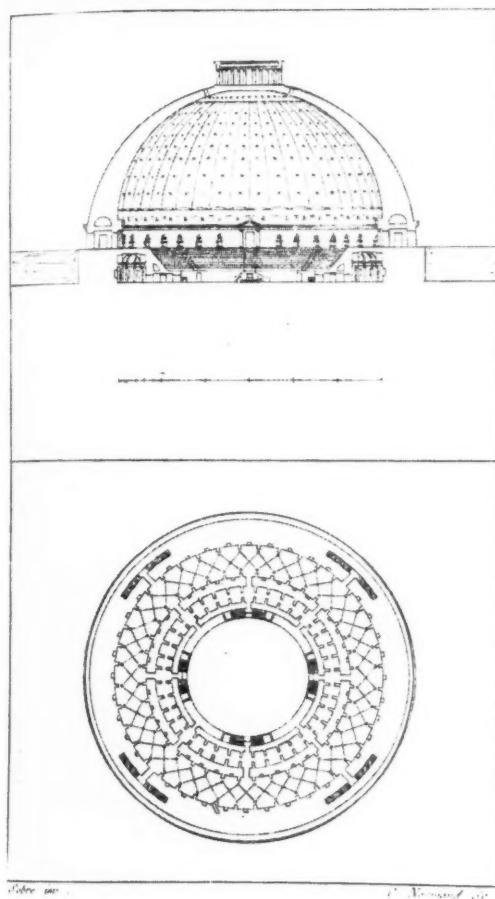
of the lowest circular step would be 175 feet. But as the height of the doors would be about 4 feet 7 inches, it may be well to try another criterion.

If, then, the doors are taken to be 6 feet 6 inches high the diameter would be 85 feet, the total height 96 feet, and the height of the columns 39 feet, or 5 feet higher than those of the Parthenon. The diameter of the lowest step would be 250 feet.

In either case M. Landon's reference to the diminutive scale of the edifice is hardly justified, and the Citizen Debracq, if he tried to realise Vaudoyer's "improvisation" as a pavilion in his garden, would find himself landed with something more like an epic than a madrigal.

* *Annales du Musée*, III. 103.

† "Aux Champs Elysées." There is no indication whether these Fields lie in the next world or between the Tuileries and the Etoile. A good case might be made out for either. (Translator.)



DESIGN FOR A TEMPLE OF IMMORTALITY. By M. Sobre

The construction of the lower half of the globe presents difficulties which it is better not to explore.

Apart from these practical questions the design may be admired as an elegant piece of architectural wit.

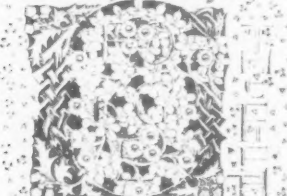
Sobre and his temple trill no madrigals; everything here is epic and Pantheonic. He starts bravely with an external diameter of 80 metres or 260 feet, while his internal dome is about 200 feet across. But again there is trouble with the doors. How will the immense congregation disperse, with no more than four of these, each 6 feet wide, debouching directly on the water? Will there not be a congestion of boats or swimmers?

And how is a worshipper to tell where he is when every quadrant is precisely like every other? The Albert Hall, a building of similar size, is bewildering enough, but at least it is an oval and has an organ and orchestra at one end.

"These things are but toys," as Bacon says, and toys must not be too seriously criticised. It is enough to glance at them and to feel that Sobre, ambitious enough in conception, lived up to his name as a master of temperance in detail, and in his ardour to omit the superfluous might challenge the austere of the Moderns. Whether they can challenge him in rational and impressive form who shall say?

The Jubilee Address to His Majesty the King

To His most Excellent Majesty



By the Grace of God
of Great Britain Ireland
& the British Dominions
beyond the Seas King
Defender of the Faith.

May it please Your Majesty.



WE Your devoted
subjects the Pre-
sident & Coun-
cil on behalf of the Royal
Institute of British Ar-
chitects and of the Archi-
tectural Societies both in
the United Kingdom &
in the British Dominions
beyond the Seas in alli-
ance therewith, of which

TO HIS MOST EXCELLENT MAJESTY, By the Grace of God of Great Britain, Ireland, and the British Dominions beyond the Seas, King Defender of the Faith.

May it please Your Majesty.

We, your devoted subjects, the President and Council, on behalf of the Royal Institute of British Architects and of the Architectural Societies both in the United Kingdom and in the British Dominions beyond the seas in alliance therewith, of which Royal Institute Your Majesty is the gracious and generous patron, beg leave respectfully to approach Your Majesty with the expression of our loyal congratulations on the happy occasion of the twenty-fifth year of Your Majesty's Reign and to tender our most devoted and dutiful homage. We earnestly pray that Almighty God will grant alike to Yourself and to Her Gracious Majesty Queen Mary many more years of peaceful and glorious reign wherein Architecture may flourish, the Arts and Sciences extend their dominion and Civilisation be ever more widely spread among a loyal and loving people.

Given under our hands and seal this fifteenth day of April One thousand nine hundred and thirty-five. GILES GILBERT SCOTT, *President*; W. H. ANSELL, *Vice-President*; JOHN BEGG, *Vice-President*; H. S. GOODHART-RENDEL, *Vice-President*; MAURICE E. WEBB, *Vice-President*; P. J. HOPKINS, *Hon. Treasurer*; HENRY M. FLETCHER, *Hon. Secretary*; IAN MACALISTER, *Secretary*.

The address was inscribed by Mr. Graily Hewett on vellum and bound in morocco.

Royal Academy Exhibition, 1935

BY H. AUSTEN HALL [F.]

The place of honour this year in the Architectural Room of the Royal Academy falls deservedly to the fine design for the Queen's Hotel, Leeds, by Messrs. Curtis Green and Partners and Mr. W. H. Hamlyn. We see Leeds under a new and tender light in the Walcot drawing by Mr. Hepworth. We also see Mr. Curtis Green carrying on the manner of his great Dorchester Hotel without the handicap of bathroom windows in the external walls, and with the freedom that this belated repeal in bye-laws has given him. The result is a building that expresses its purpose in a most dignified and charming way, and will give this great city a place at last in the affections of architects throughout the country.

Middleton Park is a great house by Sir Edwin Lutyens and Son. The Walcot drawing is a real one this time, and the building illustrates again the charm of the master who has left his indelible mark on British architecture. To say that the manner of it is now so familiar to us all is no disparagement.

Sir Edwin Cooper is well represented this year. The great Riverside Store at Deptford is a fine brick building, free from the familiar book details, and admirable in mass and scale. The drawing looks like Sir Edwin's own work, as he is one of the few architects who still do their perspectives. Sir Edwin's design for the reconstruction of Gatton Park for Sir Jeremiah Colman is another design in the grand manner, with columned porticos and a fine monumental plan. The perspective by Mr. Fred Taylor is rather overpowering in the room, and would seem to be more suitably hung among the water-colours. It is disturbing in the arrangement of the wall, and must have presented a problem to Mr. Dawber who hung the pictures this year. Among other exhibits of Sir Edwin Cooper's is the Library of St. Hilda's College, Oxford, which is a most dignified and beautiful room in the architect's best manner.

Mr. Walter Tapper sends his beautiful church in Quebec Street, a Diploma work deposited on his election as an Academician. The drawing by Mr. Charles Gascoyne is as well known as it is delightful, and we see the work of two artists at their best in this happy combination. Mr. Tapper's church is one of the first things to which we can take foreign architects visiting London with complete confidence.

Sir John Burnet, Tait and Lorne send a drawing of the German Hospital, a simple and powerful design with some modern Dutch detail about the doorway.

Other architects who are Academicians are not represented this year, which is to be regretted. After all, it is their exhibition, and all the others come in on their invitation.

One of the most important things to see is undoubtedly Mr. Tait's design for the Government Buildings, Edinburgh. This great building is admirably suited to its unusual site on the Calton Hill above the city, where it occupies the position of the former gaol, the old wall of the previous building forming the base of the new one. The outlines of the hill are admirably studied, with the scattered monuments making a good foil to the great mass of the new work. Mr. Tait has had his great chance, and has missed nothing of his opportunities. It is a magnificent achievement, and was deservedly praised in Parliament by the responsible Minister, surely a rare honour for an architect. Mr. Harvey's drawing does full justice to this subject.

Mr. George L. Wilson sends his design, with a drawing by Mr. Walcot, of the great new Hong Kong Bank, a dramatic and successful sky-scraper with well-balanced wings, and that most difficult thing, a good top storey. This is a notable building, of a class that can seldom find its way into Burlington House, for the whole Empire provides few such opportunities to British architects.

While speaking of the work overseas we must notice the building in Rangoon by Mr. T. O. Foster, who has a great reputation in Burma for his consistently good work.

Mr. Llewellyn Roberts has designed offices at Slough which are a model of their kind. We see here the modern spirit in its happiest and most successful form. The building is admirable in mass and detail, with an interesting glass superstructure. Although small compared with those previously noted, it is of great architectural importance. The same remark would apply also to Mr. Halstead Best's design for a Milk Condensary, which is a beautifully composed building, with evidences of great care in the details of the design.

In another category, but quite as good of its kind, is the new Library for the University College of Swansea, by Mr. Verner Rees, recently won in competition. The great room of the Library is nobly sustained by the projecting entrances and a low structure between them. The result is monumental and worthy of its purpose.

These last three designs mentioned are of importance because they represent a modern treatment that has dignity, scale and fine composition. They owe nothing to the extravagancies of so much continental experiment, which has proved sometimes disastrous to our national traditions. They are content with the things that have always been in the quality of great architecture, irrespective of the size of purpose of the building, and might well be studied most carefully by all whose sympathies lie with the new direction that architecture is taking in this country. If this is the path, we are on safe ground.

The same may be said of some of the smaller houses that are included in the exhibition. The Seaview Yacht Club by Mr. Gerald Warren, a cottage at Esher by Mr. St. Clair Oakes, a house at Rustington by Mr. Gerald Lacoste, and another by Mr. Duncan Wilson. These are selected at random, but they do present a modern treatment that is wholly satisfactory. It is important at the present time to distinguish between the spurious and the real thing; it is in these simple but carefully designed houses that the living spirit is preserved.

The Tower Hill Improvement Scheme by Mr. Alec Smithers is of great importance to London, and it is interesting to see what a wonderful improvement it will be. Mr. Farey's drawing shows the whole layout in an admirable way.

Mr. Edward Maufe sends two little houses. The first at Walton-on-the-Wolds is a white plaster house, with a low slate roof—very prim and simple and sedate. The other house at Poole Harbour is extremely modern and shiplike on the top of a cliff, on which it appears, however, a little uneasy, as it turns its head to see if it is still there. Mr. Beatty-Pownall's drawing is good.

Mr. Prentice sends his own picture of the lounge of a motor liner—possibly he might have done a little more with it without harm to the peace of mind of the passengers, but in these days of over-designing in ship's decoration it is agreeable to find oneself in such an atmosphere of calm where it is most needed.

The Observatory for Marlborough College, by Messrs. W. G. Newton and Partners, is perfectly charming, with a jolly revolving copper dome on a brick base. This little building is as delightful as it is unusual.

Messrs. James and Pierce have several good things in the room. Their offices for the Slough Urban District Council is a good group, and may well be a pattern for the smaller municipal buildings throughout the country. Their house on the Mendip Hills has the dignity of a Regency house, and the peace that has been taken away, except in the Mendips. It is also a good Somersetshire house.

A number of designs for flats are included in the exhibition, and it must be said with regret that the majority of these are not good. Nothing changes the face of our towns so quickly as these great blocks, generally the biggest things of their kind in the view. That their design is of the utmost importance is therefore clear. Among much that seems bad to us we would except Mr. Robert Atkinson's schemes at Albany Court and Broadwalk Court. These are excellent examples of what flats should be, but rarely are. Chiswick Court Gardens, by Mr. Evelyn Simmons, is also a most satisfactory solution of the problem.

The flats at St. Leonards, by Messrs. Dalgleish and Pullen, are a terrific proposition, enough to awake the shade of Decimus Burton, whose little Marina houses lie at the feet of the giant. It is pleasant to know that St. Leonards is so prosperous that it requires buildings sixteen stories high to house the population, but buildings of this size disturb the scale not only of St. Leonards but the whole coast. The design is good, with balconies like geological deposits that have emerged from their sub-soil into the light of day; but the problem of the general policy and wisdom of zoning remains acute.

Like Gulliver we will now become as small as possible and look at the charming little pavilion at Shepherd's Bush Cricket

Club, by Messrs. Grey and Jellicoe. So small is the drawing that it has crept into the room and has only got as far as the skirting, where it finds the critic, where he should be, on his knees. But what an excellent Pavilion it is!

Mr. de Soissons sends a great scheme for the Cornish Riviera Club, another evidence of the prosperity of the South Coast. An extremely competent piece of work.

Several good designs for county council offices are exhibited. Mr. Hepworth's scheme for Wilts County Council is a fine piece of architecture from an interesting point of view. West Sussex County Offices, by Mr. Stillman, is a good brick job on traditional lines.

Among several small town halls we would mention Beaconsfield Council Offices by Messrs. Burgess, Holden and Watson as being excellent of their kind, and the Assembly Halls at Wolverhampton, by Lyons and Israel. The design owes something to Vincent Harris in the portico, and is a clever combination of brick and stone.

The British Pavilion at Brussels, by Mr. Howard Robertson is a remarkable achievement and will go far to restore British prestige in the design of exhibition buildings. The general line is beautiful, with its great circular portico surmounted by a curved parapet wall bearing the Royal Arms. The arrangement of the flags of the Dominions is admirable. Mr. Cusdin has done justice to the subject in his drawing.

Among the churches, of which there are fewer than usual, are Mr. A. Gilbert Scott's fine design for St. James's, Vancouver; St. Alban's, Hull, by Sir Wm. Milner and Mr. J. B. Craze, an interesting composition on modern lines; and the design for John Keble Church, Mill Hill, by Messrs. Knapp-Fisher, Powell and Russell, the latter drawn geometrically as architecture should be drawn.

Bride Church by Mr. Oliver Hill is, of course, interesting and unusual. It is carefully segregated from the other churches at the end of the room, as if its unconventional appearance might have a certain religious significance. Whatever this may be, however, it is a fine piece of architecture, shown in a sympathetic drawing by Mr. Harvey.

Douai Abbey, Berkshire, by Mr. John Kendall, is an excellent school design in the traditional manner we call collegiate. The drawing by Mr. F. E. Green is one of the best in the room.

Mr. Myerscough-Walker sends a model of an amusing circular house with a highly ingenious plan for which the reasons are not at all clear, but which is done with considerable skill. It is a pity more models are not submitted.

This brief review does not pretend to be complete. Some good work has no doubt been missed, as well as some that comes in another category. But space is limited and the Editor adamant. If he allows us a few more lines we would like to put in a plea for a definite objective in designing for to-day.

Special mention has been made of three admirable designs on purpose to focus attention on their merits. History teaches that the development of style was not due to one or two men, but to whole nations sharing a common outlook. If a wider agreement were reached at the present time in the broad question of architectural development it would give powerful impetus to the best work, and go far to correct a tendency to Bolshevism in art.

A.A. ARCHITECTURE AND MUCH ELSE.

A REVIEW OF THE EXHIBITION IN THE HENRY FLORENCE HALL

Perhaps the most remarkable thing about the A.A. exhibition is not that these admirable and diversified exhibits represent the work of one school only, but that they represent what is now the normal quality of English school-bred architecture. If the students of any school in the country were given the chances which these students and members of the A.A. seemed to have found or won for themselves they could almost certainly have turned out as excellent a display. To say that is, of course, to hint, and do no more, at one of the most to be desired qualities in the training of any particular school—the extent to which it trains its men and women not merely to be capable of doing good work, but to get it. To regard job-getting powers as legitimately part of a school curriculum may seem a mercenary idea of education. But, nevertheless, it is very important. It is no use turning out students who are capable of doing everything except the initial work of convincing their prospective clients that they are capable. Success in this is perhaps a characteristic of A.A. education. One looks almost in vain to find other characteristics in the work exhibited which show it to be decisively A.A. Domestic pride might make the A.A. want to claim for all the work by students of the school some rare quality of A.A.-ishness, but to-day there are too many ideas current for it to be easy for one to dominate, unless, as it was with Walter Gropius at his *Bauhaus*, the whole system of education is framed round the personality of one man, and is dependent in every detail on his character and intellect. There was a time when through the influence of the works of various members of the staff the students would show an unbalanced penchant for, it might be, urns or banners, but these superficial loyalties seldom got beyond the school drawing board, and like other influences (the architecture of the last country visited by the A.A. tour, for instance) are little more than the pepper and salt of a full education.

It is natural even if it is perhaps unfair to look for some common factor in the work of one school, and there may well be some disappointment if it cannot be found. Almost everyone likes trains which run on rails; it is so easy to see when a train leaves the track. It is almost impossible to say when A.A. training as shown in this exhibition leaves the track, because there are as many tracks as there are clients. We like to think that one architect is more or less consistent in what he does; we suspect the man who during the morning designs a Tudor mansion for someone who likes his house that way, and during the afternoon a house *à la* Corbusier. It is a question—we dare make it no more than a question here—whether we should expect from one school the same consistency of work we like to see from the hand of one man.

Such consistency, even if desirable, could not be expected in an exhibition in England, where individualism flourishes unhitlered and in an exhibition of

work from every generation between that of the most raw, newly fledged students and old hands like Mr. Robertson or Mr. Bucknell, and for every type of client. If a mean is to be sought and found by which the work of the A.A. is to be characterised it is in exhibits by Mr. Jellicoe, all of whose buildings and garden works have an incisive simplicity which gives full scope to the expressiveness of architectural forms. Another kind of simplicity is a straitwaistcoat, and yet another is mere sentimentality. A church hall by Mr. Carpenter Turner, parts of Rowley Regis school by Mr. H. Clist, alterations to a house at Puckeridge by Mr. T. H. Bunney, a flat in Kensington by Mr. H. Tayler, Mr. Felix Goldsmith's tactful Park Lane conversions, a house at Jordans by Mr. Mauger, the weather-boarded loggia of a house at Peaslake by Mr. A. S. Knott and Miss Moseley, Mr. Wood's White Walls at Torquay, and a number of other exhibits all seem to us to conform to this characteristic simplicity. They all add something to the architecture of the time, which is more than can be said about much exhibited, which is merely boring, not bad.

It would be pleasant, if only to get back old scores on some of the exhibitors who several years ago were the critic's masters at the A.A., to regard this review as a "crig," and to subject each picture to an acedulated scrutiny. Such criticisms must be valueless unless there is a sufficiently agreed criterion to which the buildings can be expected to conform. There is none, because the types of buildings are so many, and also because, as we have suggested (critically, may be), there is no simple yardstick of A.A.-ishness. The exhibition cannot be judged on the merits of individual exhibits, but on its quality as a whole, and there can be no question that here is a display of which the A.A. can be proud. It shows in more ways than by the catholic taste exhibited in the architecture how broad is the A.A. training which can turn out Mr. Keith Murray, for instance, and claim relationship, as it were by marriage, with Mr. Hope Bagenal. It has its cinema scene designers, its designers of furniture, glass, silver, and all the ornaments of hearth and home, its archaeologists whose work does not appear here, and its town-planners. Mr. Charles Marriott in his foreword to the catalogue expresses the hope that the exhibition will show that architecture, instead of being limited to buildings above a certain rank in the social scheme, ends nowhere in the whole range of building and engineering. His hope is fulfilled both qualitatively (monkeys at the bottom of the scale and cinema stars at the top) and quantitatively (ash-trays to skyscrapers), and shows more what architects ("A.A." architects is a qualification which it is unnecessary to make) could do, as much as what they have done. There is only a week more in which the exhibition can be seen. A visit is well worth while.

THE R.I.B.A. DRAMATIC SOCIETY

PERFORMANCE AT 66 PORTLAND PLACE ON 29 APRIL 1935

Congratulations to the R.I.B.A. Dramatic Society, for the very fact of its being! Our heavily-weighted profession needs this opportunity for self-expression, and for the opportunity amongst professional friends of forgetting architecture.

The remarkable thing about the drama in England is that just when it is dying it is reviving. Just as it seems most impermanent upon the permanent boards, it becomes more engrained upon the temporary hustings. The cinema has done this. It has become the staple food of entertainment for everyone, except the stall-holder; and as it costs anything from ten to a hundred thousand pounds to produce a film, its appeal must be to the lowest common denominator, otherwise the thing will not pay. The producers have their eye the whole time on the provinces rather than the capital, the masses rather than the educated. Thus throughout the country Englishmen have gone on strike, and amateur theatrical companies are growing and giving birth to still more companies. It is more profitable for the soul of a man that he should act in a play—no matter how badly—than sit in darkness and be bullied into seeing something primarily designed to please the football crowds of Middlesbrough.

The R.I.B.A. Dramatic Society at its performance on Monday night provided three short plays. The first, *X=O*, or *A Night of the Trojan War*, by John Drinkwater; the second, *Shall We Join the Ladies?* by Sir James Barrie; the third, *They Refuse to be Resurrected*, by N. K. Smith. These three are widely different in character. The short Drinkwater play has beauty and meaning, the Barrie play is just a Barrie play, that is to say it has no particular meaning, except to provide fairy-tale entertainment for grown-ups, while the third is amusing—it made us laugh. Plays should either make us laugh or think; Falstaff and Hamlet are still the greatest figures upon our stage.

However, the Drinkwater play is a masterpiece in miniature and, unfortunately, it suffered in treatment. The purpose of the author is to show us the futility of martial heroics, even though they be Homeric heroics. The action takes place within a Grecian tent and upon the Trojan walls. Pronax and Salvius are two young Greeks, who, after all the years of wastage caused by a woman, have come to see the stupidity of the whole thing. They speak longingly of peace and the beauty of the earth. But, by the grace of war, one of them has to leave the camp each night for the avowed purpose of slaughtering a Trojan—any Trojan—upon the walls. Upon the walls also there are two young Trojans similar in youth, understanding, and idealism to the two young Greeks, one of whom drops down from the walls each night, worms his way into the Greek lines and stabs someone—anyone. That night he gets into the Greek tent and stabs Salvius whilst he is reading. Meanwhile, Pronax the Greek climbs the Trojan walls to stab Capys the

Trojan. Each "sniper" slaughters the friend of the other; thus they slaughter the equivalent of their own friends, therefore $X=O$.

Unfortunately, we in the audience could only apprehend the quality of this play by an occasional sentence. The players seemed to have no command over these good words. The loveliest thoughts just tumbled out at a nervous speed as if each actor wanted to spill the pearls before he forgot them.

Here was a play which was meant to be *spoken* rather than acted. And assuming the inability of amateurs to act such difficult parts it would have been better to have concentrated upon the beauty and meaning of the words. In such a play, action only partly consists in the movement of the body. It should consist in the tempo and power of the voice. By which I do not mean ranting, but variation and emotional emphasis. There was a singular lack of natural vocality in the first play. In fact, when one of the players forgot his lines and a pause occurred, it struck me as the most natural piece of acting of the whole evening; for in real life, that is exactly what people do under emotional stress—forget what to say.

The Barrie play went better, with full honours to Mr. Duncan Cameron who gave just the right air of sinister simplicity to the part of the host. Most of the other players were good, particularly Mr. Perrett, who spoke clearly and carried his part easily. Unfortunately, however—as is usual with most amateur societies—the players were carrying more than enough make-up on their faces for the vasty distances and limelights of Drury Lane.

The last play, *They Refused to be Resurrected*, by N. K. Smith, is an amusing fantasy in which three corpses, viz., Harlequin (Mr. Charles Fox), Pierrot (Mr. Charles Crighton) and Columbine (Miss Jane Drew), are resurrected by a thoughtless young novice of a playwright (Mr. Robert Lanchester), who, by the fact of writing about them (or their counterparts upon the modern stage), brings them back into harness and makes them say and do a number of things; things which they are not accustomed to say or do. Of course, the author is shown at work, oblivious of their presence. As he writes so they act and speak. But he keeps changing his mind. They are tired of the whole thing, and want to go to sleep, so eventually they refuse to act when he attempts to think, and his mind is baulked. It is a battle of wills, and they win.

From the point of view of acting, this last piece was the best of the lot—or it may have been that we had got more tuned to the stage and the players. In the latter respect I think it would have been better to have reversed the order of these plays. The Drinkwater play should have come last when the actors and the audience were more used to each other. This is a most important point to remember with amateur performances, for the audience is also nervous at first. Three separate plays accentuate the difficulty by raising our initial misgivings three times instead of once. The staging and lighting were extraordinarily good throughout.

F. E. TOWNDROW [A.]

Book Reviews

JOHN NASH AND HIS TIME.*

BY PROFESSOR A. E. RICHARDSON

To attempt to describe the scope of this excellent book is a very difficult task; in fact, the subject is so voluminous that a mere reviewer may crave indulgences if he fails to do justice to the skill and industry of the author. To be brief, the plan worked upon by Mr. Summerson owes its success no less to a comprehensive view of Nash as a man than to a detailed survey of his works. Every known authority has been consulted—there are no omissions and few lapses. The book, therefore, stands as a model of scholarship and accurate research. It is well arranged, the illustrations are explanatory and a guide to further study. Such is the interest of the matter that even those who do not care much about historical architecture should have little excuse to plead ignorance of events which formed the basis of architectural style in the nineteenth century.

Mr. Summerson describes buildings and designs directed by one man at a period when the social structure of England was undergoing drastic change. A mass of information inaccessible to busy professional men is packed into a small compass. Evidence of the peculiar ability of Nash as an organiser, as a town planner and to some extent as a courtier, has been marshalled with impartiality. Mr. Summerson has proved himself to be not only the master of an attractive manner of writing, but one gifted with the power to describe the composition of buildings. It is not my intention to dismiss the subject of Nash in cursory fashion. The opportunity to hold the mirror up to past, present and future events is too good to be missed, and the moral of social influences and their effect in forming art is valuable.

In any account of a particular phase of architecture the factors of contemporary civilisation and environment demand almost equal consideration to the works of art which are esteemed to be essential products of that phase. We should bring to mind the developing traits in the national character, the tendency of trade, the trend of politics; in fact, all the facets of social life which have combined to produce the arts should be weighed and analysed. In other words, the very essentials of political and industrial evolution are germane to the study of English architecture at the beginning of the nineteenth century. Mr. Summerson, in his account of Nash and the Regency, takes all this for granted. He has assumed that the average architect is fully acquainted with the period. Even if this were the case, and we know full well it is not, it is a pleasant thing to have the background sketched in in outline. No one can afford to separate

biographical study from the context of a period which was so important and one which exercised such a profound influence on the whole of the nineteenth century. In reconsidering this period, we are getting closer to the secret of the individualism of Nash and his contemporaries. We comprehend the phase through which the art of the country then passed as being, in fact, the outcome of the preceding phase and the foundation of the next. The duality of outlook, pro-Hellenic in one direction and pro-Medieval in another, forms the link between the architectural policy of the eighteenth and the more eclectic Victorian period. It becomes impossible to dissociate the achievements of our own day from the sequences of Regency and post-Regency contributions.

Searching for the basic causes of Nash's adventures into bilateral architecture it is usual to attribute the result to the persistence of the classical school and the inevitable reaction towards Gothic. The new spirit which accompanied the industrial revolution was destined to change the whole structure of society and to crowd into a century a social development for which no precedent exists. Further, it is no mistake to say that, broadly speaking, Victorian architecture, furniture and decoration owes its genesis to the example of Regency London.

It was inevitable that the stimulation of industry which began at the time of the Napoleonic War should have ended in building expansion and Metropolitan Improvement. It has proved equally inevitable that the terrific expansion of industry in the Victorian period should end in the nervous exhaustion which is characteristic of much of the art of to-day. When Nash entered the lists, what might be termed the "gentlemanly interest" in architecture was very much in evidence. But there is the reverse to the medal. Industry had already assumed recognisable proportions in the Midlands and the North. Canals were being formed and waterways improved, the coach roads were in process of retaxing. The cotton trade had developed and the factory system was threatening the by-industries. The era of the great contractor and the capitalist manufacturer was at hand. In short, the steam engine had already been harnessed and was used by Matthew Boulton for the manufacture of ornaments and toys. The period of Regency architecture coincides, therefore, with the industrial revolution and the concentration of munition workers in the South at a time when this country was fighting for its right to exist as an independent world power. Herein is to be seen the impetus essential to the building of palaces, mansions and streets of houses for the "middling people." And all this took place before

* *John Nash, Architect to King George IV.* By John Summerson. London: Allen and Unwin. 1935. 10s. 6d.

Trevithick's locomotive had inspired George Stephenson. The improvement in coach traffic following the passing of the Mail Coach Act in 1784 implied better kept roads. The French Revolution had destroyed the textile industry in France; this, too, was England's gain, and once more the need for rapid transport is seen. In the design for Highgate Archway and the project for the Regent's Canal we encounter fresh aspects of Nash's grasp of social affairs and his flair for big business. England had become a great workshop, but she retained agriculture as her staple industry. The aspect of the countryside was unspoiled, the "greenh" crept through country towns and was lost in the "blueth" of unsullied distance. Park lands already improved by Capability Brown yielded to the caress of Humphry Repton. The thatched cottage and neat shooting box fitted into the picture in proximity to more ancient buildings. It is significant that an agricultural revolution was proceeding *pari passu* with the intensive production of manufactured goods for export. Free trade had not yet disturbed the security of English markets. Small wonder that we look back with longing to this period of relative equilibrium in the Arts. It was a time when things appeared balanced and few desired alteration. Here again the value of Mr. Summerson's book is demonstrated, for it shows how faithfully architecture reflects the ideals and aspirations of a nation.

Nash was fortunate in his choice of period and able enough to grasp the potential aids to professional reputation. England at that time was far from being an old country, by comparison with the United States, which had recently severed connection with the Mother Country, the new Imperialism was more youthful. Nash enjoyed the society of the foremost men of his time; he could command expensive illustrated works on architecture, both English and foreign. He was in a position to employ talented architects and artists, such as the elder Pugin, and he saw the wisdom of forming a good working library. He it was who directed the arranging of the conventional scenery of the new shopping centre of London, thereby providing showcases for the leading tradespeople who were profiting by the revival of England's trade after Waterloo. As an architect Nash was a decorator. He lacked the artistry of Holland, while the scholarship of the newer generation exemplified by the youthful Cockerell was beyond his power. He had none of the painstaking zeal of Soane, but his was a persistence that seldom falls to the power of an ordinary mortal, and he overcame all opposition to his grandiose projects.

"Metropolitan Improvements" became synonymous with the name of John Nash. The speculations in building values in the West End of London were echoed in places as far apart as Plymouth, Newcastle and Dublin. Cheltenham and Leamington in turn became "Architectural" after the Nash manner. Finally, Decimus Burton planned the Calverly Estate at Tunbridge Wells.

The period of the Regency has been praised by Professor Goodhart-Rendel for its contribution to the Romantic Movement. Might not the age that gave the death blow to the slave trade, that discussed political reform and aided the Greeks in their fight for freedom be praised also for its humanitarian sympathies? It is the humane as well as the romantic spirit of the arts that makes the more subtle and the more lasting appeal. Mr. Summerson has described John Nash and his compositions so well that it would be superfluous to add one word to his account of the buildings in Regent's Park or even of Buckingham Palace.

As an architect Nash appears as the product of a time when English taste fluctuated between examples from the Continent, particularly France and Germany, leavened with tags of

Hellenistic detail. His ambidexterity is shown in his castle building and essays in Gothic. He did not scruple to draw upon *Vitruvius Britannicus* for elevations, or to consult Denon when in Egyptian darkness. In that silver age of the arts John Nash appears as the chief advocate of "Britannia Metal," a method which allowed of the old forms being reproduced and adapted by means of substantial alloys.

SPECIFICATION WRITING

SPECIFICATIONS FOR BUILDING WORKS. By Wilfrid L. Evershed, F.S.I. Second Edition. London: Pitman. 1935. 5s.

ARCHITECTS' SPECIFICATIONS—HOW TO WRITE THEM. By Goldwin Goldsmith, Ph.B., F.A.I.A. New York: John Wiley. London: Chapman and Hall. 1935. 12s. 6d.

THE ELEMENTS OF SPECIFICATION WRITING; A TEXT BOOK FOR STUDENTS OF CIVIL ENGINEERING. By R. S. Kirby, C.E. Fourth Edition. New York: John Wiley. London: Chapman and Hall. 1935. 10s.

The nearly simultaneous issue of these three works dealing with a subject which might be supposed to force a certain amount of resemblance in treatment serves to emphasise the different viewpoints from which the prescription of building processes may be taken.

The first-named book is of the familiar (and more immediately useful) type which consists in the main of model clauses to fit most of the circumstances of ordinary practice in house building and similar simple structural work. It is generally on sound and reliable lines, though with a tendency to the perpetuation of outworn modes, which is the danger of "copied" specifications. In any further edition the author would be well advised to subject to some further revision the sections dealing with tiler, joiner, plumber and hot water fitter, and electric lighting. Recognition of the fact that British Standard Specifications now cover many other classes of manufacture than Portland cement, and of the changes in practice produced by the introduction into common use of plywood, bituminous products, copper tubes and plastics is overdue; and a good deal of the space occupied in description of nearly obsolete practises in a work which is necessarily compressed, might be more profitably devoted to the developments which are supplanting them. This criticism is not intended to detract from the worth of a book which will undoubtedly be of renewed value to students. It would be further improved by a more comprehensive index, as it contains clauses descriptive of numerous materials not represented at all therein, and the references which are included are sometimes incomplete and even misleading. Mr. Goldsmith's book is one to be read, rather than referred to. Its scheme is the enunciation of principles of orderliness, and insistence on the importance of clear language and freedom from repetitive detail as the basis of sound specification writing. During my long term as an examiner in this subject in the R.I.B.A. Final I can recall only too many instances of students who might have benefited greatly by an appreciation of these principles. The author brings out his points clearly and well; some of his chapters dealing with debatable points (e.g., "Standardisation") are worthy of study by many who have passed the student age. One mild grumble may perhaps be indulged—the frequent, and in many cases unnecessary, footnotes interrupt the sequence in a manner which many will find irritating. They are chiefly quotations from various technical journals and appear intended to reinforce the writer's expressed opinions

on their various subjects, thereby displaying a modesty which seems uncalled for.

The third book approaches the subject from the point of view of a designer dealing with work in which a high proportion of the cost will lie in the shifting of large masses of soil or rock. In work of this type looseness of description or hasty assumptions of fact may land the employer in heavy and unprofitable extra cost—both directly and as a consequence of the time basis of a contract being extensively disturbed. Apart from this aspect, contracts which involve physical dangers greatly in excess of those commonly encountered in mere building work appear to afford increased risk of dispute as to liabilities in various contingencies, and a great deal of space is devoted in this book to means of safeguarding the employer against such eventualities. If the first book named may be classed as mainly technical, the second as administrative, this third can be called chiefly legal, and it appears to imply, by many allusions, that the risks from "sharp practice" in the civil engineering field are considerably greater than commonly arise in building practice. As a general chart of the channels, with exposure of rocks, rapids, and quicksands likely to be met with—a very specialised aspect of specification-writing—this book seems an adequate performance.

EDWIN GUNN [A.].

THE SCIENCE OF LIGHTING

A SYMPOSIUM ON ILLUMINATION. Edited by C. J. Webber Grieverson, B.Sc., M.A. (Oxon.). London: Chapman and Hall, 1935. 3s. 6d.

This is a notable book. It consists of reprints of ten lectures delivered under the auspices of the National Illumination Committee of Great Britain and the Illuminating Engineering Society of the Regent Street Polytechnic in 1933.

The Editor, who is the Honorary Secretary of the Education Sub-Committee of the National Committee, states in his preface that no attempt has been made to unify the styles of the individual lecturers who contribute chapters dealing with different phases of the work of the modern illuminating engineer. The result is that the subject of illumination as a whole is presented to the reader with a diversity of method and of mentality which must inevitably appear incongruous to the orderly mind of the practising architect; and as the lecturers are scientists or engineers, it is also to a large extent presented in a manner which will find but little favour with those who instinctively regard scientific phraseology and mathematical formulæ with that distaste and alarm which ordinary people reserve for snakes.

But even if the bulk of the book should remain unread, the first chapter by Mr. Clifford Paterson, Past President of the Institution of Electrical Engineers and of the International Illumination Commission, on "Lighting in the Service of Mankind," should alone serve to secure for the book a place on the office bookshelf—if not on the bedside bookshelf—of every architect who desires to keep abreast of modern movements in design.

It constitutes a presentation of the subject of illumination and of its relation to life and architecture which is strikingly novel; suggestive and stimulating to a remarkable degree. It must be read to be appreciated, but once read it will be re-read again and again with ever increasing pleasure. It is phrased in the obvious and simple diction which invariably characterises the

true scientist. Not only does it present well-known physical and physiological conceptions in a fresh and fascinating garb, but it draws attention to those psychological reactions, all important to the architect, which have as yet been scarcely studied at all.

One is tempted to quote wholesale, but one extract will suffice. Speaking of factory lighting, the lecturer says: "It is not enough to have sufficient lighting for safety and to secure the requisite speed and accuracy in work; even more important is the atmosphere of stimulation and well-being engendered by good illumination . . . a low level of illumination causes individuals to make up from their own store of nervous energy that stimulation to virile activity which in adequate illumination comes from outside . . . the effect of relief and well-being caused by the transition from insufficient to really good illumination is a permanent one; and we do well to reckon with it in planning the admission of daylight to our factories and in designing installations for artificial illumination."

These are words for the architect to learn by heart, remembering Le Corbusier's pregnant phrase: "Je dessine avec la lumière."

As the lectures were delivered in the far off days of 1933, the reader must expect lacunæ in our present-day knowledge of the subject, such as the application of perspective and of the mercury vapour lamp to the science of street lighting.

It is, however, somewhat strange that the subject of daylight illumination should have omitted all reference to the important reaction—partly physiological and partly psychological—to contrast, dealt with in a Government publication well before 1933, which causes the "grumble point" to remain constant over huge variations of weather.

The various lecturers are all experts with well-deserved reputations, and the architectural reader who may find their matter somewhat indigestible would do well to take to heart a sentence in Chapter I: "How many there are of us who, although grasping the theory, omit the arithmetic which will give the theory a physical significance and a vivid reality."

A charming frontispiece consists of a gold-fluted lamp of the Samurian Queen Shub-Ad, 3400 B.C. The design and craftsmanship might well pass for an example of high-class modern work.

PERCY J. WALDRAM [L.].

THE ARCHITECTS' COMPENDIUM

THE ARCHITECTS' COMPENDIUM, AND ANNUAL CATALOGUE OF THE BUILDING TRADE. Edited by J. E. Sears, J.P. [F], assisted by J. E. Sears, Jun., C.B.E., M.A., M.I.Mech.E. 49th year, 1935. London: Compendium Publishing Co. 2 guineas.

The 49th issue of The Architects' Compendium is fully up to the standard of previous issues of this useful publication. The chief value of the book, apart from the usefulness of having so many trade announcements collected together, lies in the sections at the end, in which are to be found a schedule of prices for building work, estimated for building work of some magnitude where modern appliances would be used; they include for supervision, establishment charges and profit. A schedule of prices for the supply of materials and articles delivered to site and standard wage rates in leading centres. These are followed by a technical data section and by a summary of the main provisions of the London Building Act, including the new steelwork code; a statement of district surveyors' fees; a summary of the M.O.H. Model Bye-laws; regulations as to the construction of theatres and cinemas and a summary of new legal decisions and statutes affecting building.

Accessions to the Library

1934-1935—VI

INCORPORATING NOTES ON RECENT PURCHASES

These Notes are published without prejudice to a further and more detailed criticism.

Lists of all books, pamphlets, drawings and photographs presented to, or purchased by, the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists for reference.

Books presented by Publisher or Author marked

R.

Books purchased marked

P.

** Books of which one copy at least is in the Loan Library.*

GENERAL

GENERAL

*[About 6 works, duplicates, to be placed in Loan Library.]

Presented by Mrs. Knollys.

ARCHITECTURE

ESTHETICS, DESIGN

STEVENS (G. P.)

*Concerning the curvature of the steps of the Parthenon. (*From Amer. Jnl. of Archaeology*, xxxviii.)

pam. 11". 1934. *Presented (2) by the Author [Hon. Corr. Mem.] and by Mr. H. M. Fletcher [F.].*

HISTORY

ARCHIBALD (JOHN)

*Kentish architecture as influenced by geology.

8½". 34 pp. + folding map. Ramsgate: Monastery Press. 1934. 2s. 6d. R. & P.

CURLING (T. H.)

St. Osyth. . . . A guide.

6th ed. With additions by J. H. Mitchell. pam. 7½". n.p. [19—.] 6d. *Presented.*

PADUA

Téatro prospettico. Fabbriche . . . della città di Padova. [21 engravings. Various engravers.] (In Italian and French.)

ob. fo. Padua. [17—.] *Presented by Mrs. Knollys.*

EDWARDS (W. B.)

Athens Bursary. 1934. [Report. Visit to Greece and Southern Italy].

Text, typescript, 11½"; 2 vols. photographs, 11½" x 9½". [1934.]

Presented by the Author [A.].

RUSCHWEYH (FERDINANDO), engraver

Bassorilievi antichi della Grecia o sia fregio del Tempio di Apollo Epicurio [Bassae] in Arcadia. Disegnato . . . da G. M. Wagner ed inciso da F—R—.

Presented by Mr. Percy Lovell, B.A., F.S.A. [A.].

GUSMAN (PIERRE)

Pompei: the city, its life and art. Trans. by Florence Simmonds and F. Jourdain.

12½". xvi + 423 pp. + xii pls. Lond.: Heinemann, 1900. (£2 2s. P.

SUMMERSON (JOHN)

*John Nash. Architect to King George IV.

8½". 295 pp. + xvi pls. + folding map. Lond.: Geo. Allen and Unwin. 1935. 10s. 6d. R. & P. 2

DRAWING

BIRTLES (T. G.)

Sign-writing. (Hours of leisure series, 8.)

7½". 64 pp. Lond.: Studio. 1935. 1s. P.

PROFESSIONAL PRACTICE

CHARTERED SURVEYORS' INSTITUTION and others

Standard method of measurement of building works.

3rd ed. 12½". Lond. 1935. 7s. 6d. R.

BUILDING TYPES

(CIVIL)

HOME OFFICE

Manual of Safety requirements in theatres and other places of public entertainment.

9½". 106 pp. + folding pls. Lond.: H.M.S.O. 1935. 2s. 6d. P.

(ECCLESIASTICAL)

ECCLESIOLOGICAL SOCIETY

The Ecclesiologist.

5 vols.: iv to viii on title-pages. New series 1 to 10 on covers. 1a. 80. Cambridge. 1845-48. *Presented by Mr. P. G. L. Webb.*

TRUMAN (NEVIL)

*The Care of churches, etc.

7¼". 128 pp. + (8) pls. Lond.: Philip Allan. 1935. 3s. 6d. R. & P.

WALKER (J. RUSSELL)

Pre-Reformation churches in Fife and the Lothians. Vol. i: Fifeshire. 10. Edin. 1888. *Presented by Mr. J. H. Belfrage [A.].*

COX (J. CHARLES)

*The Parish churches of England. *New edition of The English parish church*, 1914; C. B. Ford, ed.

8½". x + 118 pp. + pls. Lond.: Batsford. 1935. 7s. 6d. R. & P.

MANACCAN, Cornwall

A Short guide to the churches of Manaccan and St. Anthony.

pam. 7". n.p. [19—.] 2d. *Presented.*

DOBLE () and ATCHLEY (M.H.N. CUTHBERT)

A Guide to Constantine church [Cornwall].

leaflet. 8½". n.p. [19—.] 2d. *Presented.*

(EDUCATIONAL)

PREDER (ALBERT)

Das Moderne Englische bibliothekswesen. (Zentralblatt für bibliothekswesen, beih. 66.)

9½". xix + 188 pp. (incl. pls.). Leipzig: Harrassowitz. 1933. *Presented by the author.*

(DOMESTIC)

CLINCH (H. G.) and BANNINGTON (B. G.)

Unfit houses. A guide to part II. of the Housing Act, 1930 etc.

7½". vii + 78 pp. Lond.: H. K. Lewis. 1935. (3s. 6d.) P.

KEAY (L. H.)

Working class flats: a solution of the problem of rehousing. [Lecture.] typescript. 13". 1935. R.

HUSSEY (CHRISTOPHER) and OSWALD (ARTHUR)

Home House, No. 20 Portman Square. Etc.

7¼". x + 29 pp. + 32 pls. Lond.: Country Life. 1934. 1s. 6d. P.

ALEXANDER (J. R. WILLIS)

Incorporated Accountants' Hall: its history and architecture. (Society of Incorporated Accountants and Auditors.)

3rd ed. pam. 11" x 8½". 1935. *Presented by the Society.*

SOCIETIES

NATIONAL HOUSING AND TOWN PLANNING COUNCIL

Annual report: 35th for 19[34]-35. 1935

NATIONAL HOUSING AND TOWN PLANNING COUNCIL

[Six pamphlets: Annual conference . . . ; Facts and figures . . . ; Memorandum . . . (3).] 6 pams. 6". Lond. 1935. R.

CRAFTS, FITTINGS

ANDERSON (M. D.)

The Medieval carver.

7¼". xix + 187 pp. + xx pls. Cambridge: U. P. 1935. 8s. 6d. P.

WOODFORD (CHRISTOPHER)

The Medieval glass of St. Peter Mancroft, Norwich.

8½". 56 pp. + (7) pls. Norwich: Goose & Son. [19—.] 2s. P.

LÜER (HERMANN) and CREUTZ (MAX)

Geschichte der metallkunst.

2 vols. 9½". Stuttgart: Enke. 1904-09. (£1 1s.) P.

BORENIUS (TANCRED)

St. Thomas Becket in art.

10". xix + 122 pp. + xlv pls. Lond.: Methuen. 1932. (6s., remaindered.)

Review of Periodicals

Attempt is made in this review to refer to the more important articles in all the journals received by the library. None of the journals mentioned are in the loan library, but the Librarian will be pleased to give information about prices and where each journal can be obtained. Members can have photostat copies of particular articles made at their own cost on application to the Librarian.

CIVIC BUILDINGS

ARCHITECT AND BUILDING NEWS. Vol. CXLII. No. 3462. 26 April. P. 88.

BUILDER. Vol. CXLVIII. No. 4813. 3 May. P. 822.
Worthing municipal assembly hall. (C. Cowles-Voysey [F.])

CHURCHES

ARCHITECTS' JOURNAL. Vol. LXXXI. No. 2101. 25 April. P. 623.

ARCHITECT AND BUILDING NEWS. Vol. CXLII. No. 3463. 3 May. P. 117.

Church of St. Mary, Becontree. (Welch, Cachemaille-Day and Lander [F.A.])

MONATSHEFTE F. BAUKUNST U. STADTEBAU. Vol. XIX. No. 5. P. 189.

A small wooden chapel, St. Bonifatius at Frankfurt-am-Main-Bonames (Martin Weber) and a wooden church at Breslau (A. Trumpke), with an interesting timber roof on crucks, very well illustrated.

OFFICES

ARCHITECTURE ILLUSTRATED. 1935. April. *

Offices and showrooms by Austen Hall [F.] and Whinney, Son and Austen Hall for various gas companies, the Metropolitan Water Board and a London wholesale draper.

BUILDER. Vol. CXLVIII. No. 4812. 26 April. P. 774.

Rubber Exchange, Mincing Lane. Exchange building, including members' club house. (A. W. Moore and Nicholas and Dixon-Spain [FF.])

SHOPS

TÉR ÈS FORMA (BUDAPEST). Vol. VIII. No. 4. April. P. 103.

Modern shops and shopfronts in Budapest.

THEATRES AND CINEMAS

BAUMEISTER. Vol. XXXIII. No. 5. May. P. 128.

The Grand Theatre, Shanghai. (L. E. Hudec.) A cinema seating 2,200. Also Lafayette Cinema, Shanghai, and a cinema at Zlin, Czecho Slovakia (F. L. Gahura), for 2,200 seats.

TÉR ÈS FORMA (BUDAPEST). Vol. VIII. No. 2. February. P. 44.

Design for an open-air theatre. (P. Kaffka.)

MONATSHEFTE F. BAUKUNST U. STADTEBAU. Vol. XIX. No. 5. P. 169.

A German festival theatre. Design for a vast theatre by Hans Poelzig. Also an article on the historical development of the theatre.

BANDSTANDS

PENCIL POINTS. Vol. XVI. No. 4. April. P. 171.

Band Pavilion at Sioux City for an open air auditorium. The pavilion is a large half-saucer shaped reflector carefully designed for good acoustic properties.

TRANSPORT BUILDINGS

ARCHITECT AND BUILDING NEWS. Vol. CXLII. No. 3463. 3 May.

Railway station, Oberhausen. (K. Herrmann with F. Tappe and K. Schoner.)

BOUWKUNDIG WEEKBLAD ARCHITECTURA. 1935. No. 17. 27 April. P. 185.

Railway signal box at Harlem. (H. G. J. Schelling.)

ARCHITECTS' JOURNAL. Vol. LXXXI. No. 2010. 25 April. P. 636.

A one-storey garage in Berlin. (F. Forbat.)

ABATTOIRS

TECHNIQUE SANITAIRE ET MUNICIPALE. Vol. XXX. No. 4. April. P. 75.

Article on the treatment and disposal of waste water, etc., from abattoirs; well illustrated.

BRIDGES

CASA BELLA. Vol. XIII. No. 88. April. P. 24.
Concrete bridge over the Tevere. (G. Pagano.)

HOSPITALS, ETC.

BUILDER. Vol. CXLVIII. No. 4811. 19 April. P. 734.

Royal London Ophthalmic Hospital, City Road. (Campbell-Jones, Sons and Smithers [FF.])

CONSTRUCTION MODERNE. Vol. L. No. 29. 21 April. P. 646.

Hospital at Miliana, Algeria (X. Salvador, architect). Interesting design for hot climate. Provides 160 beds for civilians and 60 reserved for the military.

CASA BELLA. Vol. XIII. No. 88. April. P. 39.

Anti-tubercular dispensary (I. Gardella and E. Martini); also provincial research laboratory by the same architects.

SPORTS BUILDINGS

CONSTRUCTION MODERNE. Vol. L. No. 30. 28 April. P. 658.

Ice rinks. Article illustrating several rinks and describing construction, planning requirements and equipment. A useful reference.

CASA BELLA. Vol. XIII. No. 88. April. P. 8.

"Il Golf dell' Ugolino," Florence. A country club, including restaurant, etc., club house, bathing pool, etc.

UNIVERSITIES AND SCHOOL BUILDINGS

BUILDER. CXLVIII. No. 4813. 3 May. P. 816.

University of Liverpool Students' Union (C. H. Reilly, L. B. Budden, J. E. Marshall [FF.]), includes assembly hall dining-rooms, library, club rooms, etc.

ARCHITECT AND BUILDING NEWS. Vol. CXLII. No. 3462. 26 April. P. 95.

A school near Paris. (J. Debat-Ponsan.)

ARCHITECTURE. Vol. XLVIII. No. 4. April.

School, Rue Kuss (M. R. Expert), a large school group. Also boys' school, Rue St. Martin (M. A. Berry).

BAUMEISTER. Vol. XXXIII. No. 5. May. P. 161.

Engineering laboratory of the State Technical High School, Zurich, with lecture theatre, machine rooms, drawing offices, etc. O. R. Salvisberg, architect.

MONATSHEFTE F. BAUKUNST U. STADTEBAU. Vol. XIX. No. 5. P. 181.

Aarhus University, Denmark (K. Fisker, C. P. Möller and P. Stegmann), a modern chemical and physical university building.

SPAS

BAUMEISTER. Vol. XXXIII. No. 5. May. P. 149.

Spa building at Wildbad im Württ, Schwarzwald.

EXHIBITION BUILDINGS

ARCHITECTURE. Vol. XLVIII. No. 4. April.

More designs for Paris Exhibition, 1937. Seine water fête, transport and tourist building, applied arts.

BOUWKUNDIG WEEKBLAD. 1935. No. 18. 4 May.

Brussels Exhibition, construction of the great hall.

DOMESTIC

ARCHITECTURAL FORUM. Vol. LXII. No. 4. April.

The House for modern living. Illustrations of one hundred designs submitted in a competition for ideal small houses organised by General Electric Co. (a total of 2,040 designs were submitted). The competitors were asked to design houses of 20,000 and 35,000 cubic feet capacity alternatively for northern and southern climates. The programme was stated in the terms of the needs of an average American middle-class family. Mr. Bliss, "a young and energetic engineer of thirty-two." Mrs. Bliss "educated at the same university as her husband . . . does her own house work, has two children. . . ." Many of the designs are of great interest, and almost all "modern." At the end of the issue are illustrations of a house in California at Altadena by R. J. Neutra which was awarded a gold medal as the best house of its type actually erected during the past year.

FLATS

ARCHITECTS' JOURNAL. Vol. LXXXI. No. 2102. 2 May. P. 660.

Special number on Residential Flats. A useful reference illustrating a number of the best recent modern style flats in England, including Highpoint, Highgate, by Tecton [A.A.]; King's Court, Ravenscroft Park, by J. H. Minty [F.]; Highfield Court, Golders Green, by A. V. Pilichowski [A.]. Also special articles on equipment, conversion and finance.

CONSTRUCTION MODERNE. Vol. L. No. 30. 28 April. P. 658.

Modern apartment building, Paris (Ginsberg and Heep). Seven floors above ground floor, each with four flats, and the eighth floor comprising two maisonnettes. Built of reinforced concrete with "confort" blocks.

TÉR ÈS FORMA. (BUDAPEST.) Vol. VIII. No. 4. April. P. 93.

Housing. Illustrations of ambitious schemes for flats in Budapest.

MONATSHEFTE F. BAUKUNST U. STADTEBAU. Vol. XIX. No. 5.

Special plates on the normal dimensions of man affecting domestic furniture and building elements. A useful reference, well illustrated.

HOSTEL

MASTER BUILDER. Vol. XL. No. 873. April. P. 112.

Hostel at the Mussolini Stadium, Rome, for the *Balilla*, the children's section of the Fascist organisation; two large dormitories, dining-rooms and kitchens.

MATERIALS

ARCHITECTURAL RECORD. Vol. LXXVII. No. 4. April. P. 243.

Paint and lighting. A useful article on the value of good painting and decoration as a factor in good lighting.

MONATSHEFTE F. BAUKUNST U. STADTEBAU. Vol. XIX. No. 5. P. 187.

External finish of granite walls, pointing and masonry treatment, illustrated by a number of good photographs.

BUILDING SCIENCE

JOURNAL OF INSTITUTE OF HEATING AND VENTILATING ENGINEERS. Vol. III. No. 26. April. P. 49.

The Exclusion of Solar Heat. Second instalment of articles by Mr. H. E. Beckett describing recent research work at the B.R.S.

TOWN PLANNING

JOURNAL OF INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. Vol. LXI. No. 22. 23 April. P. 1179.

Problems of the growing suburb. A thorough survey of the social, hygienic and architectural requirements of a modern suburb, illustrated by reference to Heston and Isleworth by O. P. F. Hilton, Deputy Borough Engineer.

ARCHITECTURAL RECORD. Vol. LXXVIII. No. 4. April. P. 243.

Frank Lloyd Wright describes "Broadacre City," an ideal community; "a general decentralisation and architectural reintegration of all units into one fabric," explained by means of a large model made by Wright and his apprentices at Taliesin, Wisconsin.

LAW

JOURNAL OF ROYAL SANITARY INSTITUTE. Vol. LV. No. 11. May. P. 619.

Housing Act, 1930: Promise and Performance. Paper by C. A. Stansbury, Housing Inspector, Walsall.

WALL PAINTING

PROCEEDINGS OF ROYAL INSTITUTE. Vol. XXVIII. Part III. No. 134. P. 382.

Professor E. W. Tristram on English Mediaeval Mural Painting.

MEMORIALS

MONATSHEFTE F. BAUKUNST U. STADTEBAU. Vol. XIX. No. 5. P. 161.

The Tannenberg memorial: design for the Hindenburg mausoleum.

INDUSTRIAL DESIGN

ARCHITECTURAL RECORD. Vol. LXXVII. No. 4. April. P. 227.

Applied and industrial art. Articles and illustrations. H. W. Corbett on industrial design and the architect.

Correspondence

9, Old Square,
Lincoln's Inn, W.C.2

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—A letter in *The Times*, by Mr. Henry Tonks, clamouring for sartorial colour in St. Paul's, raises in my mind once more the idea of colour, or at all events form, at architectural functions.

Is the question of robes for architects too stale and unprofitable to be referred to again in your pages?

When the subject, on its last appearance, was, like chivalry, "laughed away," the laughter was perhaps not unreasonable. *Everybody* was to be vested, not only the President, but the latest licentiate, and visions arose of the Institute's silk and stole being flaunted by cheerful youths on occasions insignificant, and perhaps festive rather than professional.

Could not robes be authorised only for presidents, members of Council and gold medallists, past and

present? They would, I think, be self-sacrificingly worn, after modest protest.

We have one of the most distinguished buildings in London; why should those who are prominent in it, be (in appearance) dull?

There are occasions of State, like the Jubilee, when it would be fitting that those who represent the Institute should be garbed by the Institute, and not by some university, however ancient.

There are countless local functions, where the importance of the architect, in the eyes of the simple, would be emphasised by a robe of office; and why should he not join the company of bishops and curates, mayors and freemasons, and add beauty to the scene by his vesture, as well as dignity, by his virtue? It would be, as Pepys would say, "very noble."—Faithfully yours,

HERBERT IBBERSON [F].

Obituary

W. BAINBRIDGE REYNOLDS

We have received the following note on Mr. Bainbridge Reynolds from Mr. C. F. Annesley Voysey [F].

I do feel that as an affectionate friend for 61 years, a little known great man should have it recorded how he was regarded by the two professions of Architecture and the Church. All the leading architects of the last 50 years regarded William Bainbridge Reynolds as a great artist, the writer and many others declaring him to be the finest of our day.

Reynolds, who died on 31 March last, aged 80, was articled in 1870 or 1871 to J. P. Seddon, F.R.I.B.A., for five years, then entered George Edmund Street's office during the building of the new Law Courts, afterwards acting as draughtsman with the Royal Engineers, and then made a speciality of architectural metal work.

Ultimately Reynolds established workshops of his own, and trained a staff of highly-skilled craftsmen. He executed work, frequently designed by himself, for all the leading architects of his day. There is hardly a cathedral in Britain in which there is not an example of his work, and in many a church also. Archbishops, bishops and other dignitaries of the church know well and appreciate the work of Bainbridge Reynolds, which was not confined to metal work but included nearly every craft and material, such as stained glass, embroidery, ivory, etc. His knowledge of ecclesiastical forms, ceremonies, furniture and ornaments was vast. Being a very high churchman he had profound reverence for traditional ceremonial and symbolism. His

personal charm was marked by gentleness, courtesy and manliness: in every way a sensitive gentleman. He was intensely musical and much more thoughtful than talkative. One often wished he would say more because of his charming voice.

It is impossible to give a complete list of his many works, but the following should be mentioned: altar furniture, etc., at St. Paul's Cathedral, Westminster Abbey, York Minster, Canterbury, Llandaff, Norwich, Christ's Church Priory, Durham Cathedral, and other cathedrals and churches. In addition, of course, he carried out many secular works.

As most of Reynolds's work was done for architects and ecclesiastics, his name was seldom mentioned.

VINCENT HOOPER [A].

Born on 13 June 1879, at Redhill, Mr. Vincent Hooper was the second surviving son of Mr. Thomas Rowland Hooper, architect, and the late Mrs. Elizabeth Hooper. He was educated at Reigate Grammar School. After leaving he was articled, from 1894-98, to his father, obtaining valuable experience of local architectural practice.

From 1898 he served as assistant to Messrs. Boardman and Son, of Norwich, for some years and during his spare time was actively engaged in measuring and sketching portions of the fine Norfolk churches nearby. It was at this point in his career that he gained interest in water colour sketching, which he developed in after years under the late Mr. Tatton Winter, R.B.A., into a distinctive style of his own. An exhibition of his pictures took place in Reigate in October 1927. It is to be regretted that pressure of business in recent years has prevented further works. Mr. Hooper, however, took considerable interest in local art and assisted at many exhibitions, including those of the Holmesdale Fine Arts.

After leaving Norwich he became assistant to Mr. Arthur Keen, F.R.I.B.A., of Grays Inn, thereby gaining experience of building conditions in London. Before returning to the Redhill practice he made a tour in the West Country to study and draw many fine historical buildings. At this time he joined the Architectural Association, of which he remained a life member. On his return he entered into partnership with his father, and, passing his qualifying examinations, became an Associate of the Royal Institute of British Architects in 1904.

In 1909 he married the eldest daughter of the late Mr. Tatton Winter. Mr. Hooper joined the Royal Engineer Reserves at the beginning of the war and was called up for active service in 1916. He obtained a commission and was drafted to Flanders, serving with the 142nd Army Troops Company R.E. until the end of the war, being demobilised early in 1919. During his service in Flanders he seized every opportunity of sketching landscape and architectural subjects.

On his return home he started once more in architectural practice and worked up a considerable business in the neighbourhood. He moved his office to Reigate in 1930, after taking over the practice of the late Mr. C. E. Salmon, at 67, High Street. Amongst his many works the series of schools he has designed for the Borough Education Committee, both alone and in partnership with his father, are well-known. They include Cronwell Road, Hooley and St. John's Girls' Schools and, more recently, the much admired new Junior School at South Park.

In competition work previous to the war he showed pre-eminence in design, winning in 1913 the competition for the

City of Liverpool Sanatorium at Fazakerly. At the time of its construction it was one of the very largest sanatoria in England and most up-to-date in its conceptions of sanatorium construction. He also won the open competitions for the Reigate Lodge Estate layout, the Infirmary at the then 'Guardians' Institute, Redhill, and after the war the limited competition for the South Park War Memorial.

His interest in hospital design, fostered by his success as Saxon Snell prizeman in 1913 for study in this branch of architecture, led to his designing in recent years the addition to the East Surrey Hospital, Redhill, formally opened by Princess Mary. In collaboration with Mr. F. G. Troup, F.R.I.B.A., he also designed the Carshalton War Memorial Hospital.

In the field of domestic architecture his houses are too numerous to mention, both in the locality and as far distant as the South Coast. Twenty-five of the new houses on the High Trees Estate can be placed to his credit, as also the development of a number of estates and designs for small houses in the district. His more recent works include the alterations to the Redhill Market Hall, Barclays Bank, Redhill, the new Redstone Cemetery Chapel, a dignified and beautiful building, and Messrs. Hall and Co.'s new showrooms at Redhill. By strict integrity and a thorough mastery of even the smallest details evident in all his work he has throughout his career won the confidence and esteem of the many clients, builders and workmen with whom he came in contact.

His practice will be carried on by his son, Mr. Morris Hooper, at the same address.

Notes

SIR RAYMOND UNWIN

At the Commemoration of Founders' Day at Manchester University, on 15 May, an honorary degree of LL.D. will be conferred on Sir Raymond Unwin.

XIII CONGRÈS INTERNATIONAL DES ARCHITECTES

The opening of the XIII International Congress which is being held this year in Rome will take place on 22 September.

The meetings will be held at the Institute of Architecture in the Valle Giulia.

Visits and excursions in Rome and to the new Centres of Littoria, Sabaudia and other Italian towns will be organised to give members of the Congress an idea of the constructive and architectural activity in Italy to-day, and of contemporary town-planning schemes. Congress members will have the advantage of special reductions in fares both by rail and sea.

The matters to be discussed at the Conference are:

1. Design and production of new materials and results obtained from their use.
2. Knowledge useful to architects, both official and independent, in the study of public buildings and town planning.
3. Report of the means which architects can employ so as to make various State Administrations and the public clearly understand the advantages to be obtained by resorting to their experience and direct services without the useless intervention of other persons such as building societies.
4. The standardisation of apartment houses.
5. Underground construction, circulation and protection.
6. The protection of plans and right of architects to supervise their construction.

7. Architectural competitions and constructions of public character.

Congress members are kindly requested to send their reports to the Secretary's office, Lungotevere Tor di Nona, N.1, not later than 15 July. For any further information please apply to the Secretary's office.

VISIT TO THE BUILDING RESEARCH STATION

A visit to the Building Research Station at Garston, near Watford, has been arranged to take place on Thursday, 23 May, in the afternoon, when the subject for discussion and demonstration will be "Some Problems Concerned with the Exclusion of Rain." Members visiting the station for the first time may, however, prefer to make a general tour of the station, and arrangements for splitting the party into two groups are accordingly being made.

A fast train leaves Euston Station at 2.5 p.m., and Cheap Day Return tickets are available at 2s. 2d. Those travelling by train will assemble outside Watford Junction Station at 2.40 p.m., and it is hoped that members travelling by car and able to take a passenger or passengers will meet the party there.

All members of the R.I.B.A. Standing Committees are particularly invited to take part in the visit and to bring friends, and it is hoped that a large number will be present. Any member is welcome.

Anyone wishing to take part in the visit is asked to let Mr. L. W. Thornton White [A.] (Hon. Sec., Science Standing Committee) know not later than Friday, 17 May.

MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

The Architects' Registration Council of the United Kingdom offer for award in July 1935 two Maintenance Scholarships in Architecture. The Scholarships will consist of a grant for the payment, in whole or in part, of the school fees and necessary subscriptions, instruments, books, etc., and, when necessary, a maintenance allowance not to exceed as a rule £100 a year. The Scholarships will be renewable from year to year until the student has finished his or her school training. They will be available for students of British nationality who could not otherwise afford such training to enable them to attend architectural schools approved by the Council. The Scholarships will be available both for students who have already begun their training and for students wishing to begin their training. They would not normally be granted to students under 17 years of age.

Particulars and forms of application may be obtained from the Secretary to the Board of Architectural Education, Architects' Registration Council of the United Kingdom, 18 Abingdon Street, Westminster, London, S.W.1.

The closing date for the receipt of applications, duly completed, is 7 June 1935.

VISIT TO THE ITALIAN RIVIERA
SEPTEMBER 1935

There are some vacancies in a small party which is this year visiting Levanto, Genoa, Pisa, etc., and members wishing to visit the Italian Riviera are invited to join the party.

The holiday is for 15 days commencing Friday evening, 30 August, travelling via Havre, Paris and the Genis Tunnel. The cost, including all fares, hotel accommodation and a motor excursion, is 15 guineas. Particulars can be obtained from Mr. H. W. Chester, A.R.I.B.A., H.M. Office of Works, Westminster, S.W.1.

THE FINAL AND SPECIAL FINAL EXAMINATIONS

The following are the dates on which the forthcoming Examinations will be held:—

Final Examination.

3, 4, 5, 6, 8, 9 and 11 July 1935. (Last day for receiving applications: 3 June 1935.)

Special Final Examination.

3, 4, 5, 6, 8 and 9 July 1935. (Last day for receiving applications: 3 June 1935.)

Allied Societies

NORTHAMPTONSHIRE, BEDFORDSHIRE AND HUNTING-
DONSHIRE ASSOCIATION OF ARCHITECTS

ANNUAL GENERAL MEETING

The annual general meeting of the Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects was held at the Swan Hotel on 17 April, when Mr. George P. Allen, F.R.I.B.A., was elected President for the year. Mr. C. Croft, L.R.I.B.A. (Northampton), and Mr. W. H. S. Hubbard, L.R.I.B.A. (Luton), were elected Vice-Presidents; Mr. F. A. Coles, L.R.I.B.A. (Northampton), hon. secretary; Messrs. F. H. Allen, L. F. Harris, and G. H. Lewin (Northampton), B. C. Deacon (Luton), J. A. Gotch, F.S.A. (Kettering), S. H. Goode, H. Haines (Bedford), W. A. Lea (Huntingdon) and T. T. Panter (Wellingborough) were elected to the Council. The Hon. Secretary submitted a satisfactory report and stated that the membership numbered one hundred and thirty professional members and eighteen honorary members. The President, in a short address, referred to the increasing responsibilities of architects in their relations with the civic authorities and the public under present-day conditions and legislative enactments, comprising town-planning, housing, street improvements, slum clearance, road traffic, and the preservation of the countryside. Projected works in Bedford were also reviewed.

LEICESTER AND LEICESTERSHIRE SOCIETY OF
ARCHITECTS

The annual meeting of the Leicester and Leicestershire Society of Architects was held at the Church Rooms, 5 S. Martin's East, Leicester, on Tuesday, 16 April 1935, and a year of successful activity was reported by the Society's Council and its committees.

Mr. T. Trevor Sawday, F.R.I.B.A., after two years' service, retired from the Presidency of the Society, and was accorded a hearty vote of thanks for his work. Mr. Clement Stretton, F.R.I.B.A., was unanimously elected to succeed him as President.

The hon. treasurer (Mr. A. F. Bryan), the hon. secretary (Mr. G. A. Cope), and the hon. librarian (Mr. A. E. Smith) were each re-elected and thanked for their services during the past year. In addition to the officers, Messrs. E. T. Allcock, T. W. Haird, G. Nott, E. J. Williams, Anthony Herbert, and A. Ewart Smith were elected to serve on the Society's Council.

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT
SOCIETY OF ARCHITECTS AND SURVEYORS

ANNUAL GENERAL MEETING

The Annual General Meeting of the above society was held in the Education Rooms at Sheffield University on 11 April. Apologies were received from Mr. C. M. Hadfield, Mr. R. Cawkwell, and Mr. H. de B. Archer.

The annual report of the council was read and approved.

Mr. Inott submitted the statement of accounts, which was adopted.

The following were elected as Student Members:—

R. B. Thomson, 15 Beehive Road, Sheffield, 10; Kenneth Morton, 50 Greystones Avenue, Sheffield, 11; John Bloxham, 22 Baxtergate, Doncaster.

A vote of thanks was passed to the Hon. Secretary and the Hon. Treasurer for their services during the past year.

The question of an annual excursion was discussed and it was decided that the Hon. Secretary should try to arrange a visit to Chatsworth and Haddon Hall, to be on a Saturday, the date suggested being 6 July.

The question of an excursion to Doulton's Pottery Works, near Stoke-on-Trent, was mentioned, but it was deferred until the results of the negotiation with regard to the first visit mentioned were known.

The following officers were re-elected for session 1935-36: *President*, J. Mansell Jenkinson, F.R.I.B.A.; *Vice-President*, J. Amory Teather, F.R.I.B.A.; *Hon. Treasurer*, J. R. Wigfull, M.A., F.S.A., F.R.I.B.A.; *Hon. Secretary*, H. B. S. Gibbs, F.R.I.B.A. *Council*, E. M. Gibbs, F.R.I.B.A.; Alderman W. C. Fenton, F.R.I.B.A.; C. B. Flockton, F.R.I.B.A.; F. E. Pearce Edwards, F.S.A., F.R.I.B.A.; C. M. Hadfield, F.R.I.B.A.; J. Lancashire, F.R.I.B.A.; R. Cawkwell, A.R.I.B.A.; W. G. Davies, F.R.I.B.A.; H. I. Potter, A.R.I.B.A.; H. de B. Archer, P.A.S.I.; J. C. P. Toothill, A.R.I.B.A.; S. Welsh, M.A., B.Arch., F.R.I.B.A.; H. Phayre, A.R.I.B.A.; E. H. Ashburner, A.R.I.B.A.; H. W. Inott, L.R.I.B.A.; D. B. Jenkinson, A.R.I.B.A. (Rotherham); C. F. Moxon (Barnsley); E. H. Walker, F.R.I.B.A. (Doncaster); C. B. Wagstaff, F.R.I.B.A. (Chesterfield).

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Victor Bain, President, took the chair at a meeting of the above held in Leeds on 11 April, when the winner of a Sir William Nicholson Travelling Studentship, Mr. J. R. Tolson, lectured on his impressions of Denmark and Sweden, and said that in both countries brickwork was the traditional treatment for exterior work, and he had been struck by the clever use of bonds and the handling of mortar.

The principal bond used was a cross between Flemish and Flemish garden wall, and consisted of two stretchers to each header in the same course, and this formed a pleasant zigzag pattern. At Elsinore, the scene of Shakespeare's "Hamlet," he thought that Kronborg Castle was the most beautiful renaissance building in Scandanavia, the walls being in some cases 12 feet in thickness. As for Sweden, he regarded the new crematorium, by Ostberg at Halsingborg, as an architectural gem based on traditional forms, whereas the theatre was a purely functional design, though of much interest. The new Concert Hall at Gothenborg contained a brilliant idea: curved roof-trusses alternating with clearstorey windows, a fine instance of essential structural features forming the motif of the interior design. As to the architecture generally of these countries, he said, they were too apt to think only of buildings erected in recent years, and to look on them as something quite new in idea and outlook. In reality the most famous of them were the culmination of the development of a national style, tinged with the genius and personality of the designers. The Stockholm Town Hall ended rather than began a new epoch. To sum up, he found in Denmark classic simplicity and refined detail gave a graceful austerity to its buildings; whilst in Sweden a more adventurous spirit was evident, much affected by the functionalism found in Germany, Austria and France.

The lecturer, whose remarks were profusely illustrated on the screen, was accorded a vote of thanks on the motion of Mr. Frank Tranmer, and seconded by Mr. Allan Johnson; whilst, among others, Mr. J. S. Allen spoke in support.

ROYAL INSTITUTE OF ARCHITECTS OF IRELAND

A general meeting of the Royal Institute of the Architects of Ireland was held in the Council Chamber at 8 Merrion Square, Dublin. The President, Mr. H. Allberry, F.R.I.A.I., in the chair.

The minutes of the last general meeting having been read and signed, the Code of Professional Conduct as recommended by the Council was fully discussed, and with some minor amendments was unanimously approved.

It was decided that the hours for general meetings, except for the statutory meeting in June, should in future be 8 p.m.

The President, welcoming Mr. F. McArdle, M.R.I.A., Belfast, stated that the Council had under consideration the various matters discussed by representatives of the Institute and of the Royal Society of Ulster Architects last year, and hoped that before long many of the suggestions would be mutually adopted. He asked Mr. McArdle to convey the good wishes of the Institute to their colleagues in the North.

ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND

At the monthly meeting of the Council of the Royal Incorporation of Architects in Scotland held at 15 Rutland Square, Edinburgh, Mr. Wm. B. Whitley, F.R.I.B.A., President, in the chair, it was unanimously decided to renominate Mr. Whitley as President for year 1935-36, while Mr. John G. Marr, F.R.I.B.A., Aberdeen, was nominated as Incorporation Representative *vice* Mr. Wm. Cowie, F.R.I.B.A., Ayr. The secretary intimated that it had been arranged with the British school at Rome that the Rowand Anderson Student be automatically admitted to the Rome Scholarship Competition on the same conditions as the winners of the Soane and Victory Scholarships. Mr. Balfour Paul, Convener of the House and Finance Committee, reported on the accounts for year 1934, which showed the finances of the Royal Incorporation to be in a very flourishing condition. Mr. F. C. Mears, F.R.I.B.A., Edinburgh, and Col. J. Maurice Arthur, F.R.I.B.A., Airdrie, were appointed as the two architectural representatives on the Buildings Materials (Scotland) Committee now being set up by the Scottish National Development Council. The following members were elected:—Messrs. W. R. Samson, Forfar; J. D. Samuel, Newarthill, and David Hain, Jr., Laurieston—as *Associates*; and Messrs. W. F. Milne, Dundee, L. B. Paul, Tynehead, A. B. Wylie, Colinton, R. J. Forsyth, Glasgow, J. W. Macdonald, D. G. Wilson, W. W. Allam and T. C. Watson, Inverness, J. D. Corbett, Tain, and Francis Murray, Elgin—as *Students*.

SCHOOL NOTES

WELSH SCHOOL OF ARCHITECTURE EASTER VACATION TO PARIS

During the Easter Vacation a party of students from the Welsh School of Architecture visited Paris and the neighbourhood for the purpose of studying buildings—Medieval, Renaissance and Modern.

The students were accompanied by Mr. Lewis John, M.A., B.Arch [A], and Mr. Trevor Hill [A], Mr. John being responsible for the arrangements for the visit.

The visit proved to be very interesting and valuable owing to the wide variety of important buildings which were visited.

Membership Lists

ELECTION OF STUDENTS R.I.B.A.

The following were elected as Students R.I.B.A. at the meeting of the Council held on 15 April 1935.

(In the case of students of Schools of Architecture recognised for exemption from the R.I.B.A. Intermediate Examination the name of the school is given.)

ABERDEEN: DAVID WILLIAM, 9 Eagle Lane, Snaresbrook, Essex. (University of London.)

AKED: LESLIE WILLIAM, 465 Mather Avenue, Allerton, Liverpool, 19. (Liverpool School of Architecture.)

BARROW: ARTHUR, 65 Ormonde Street, Sunderland. (Armstrong College, Newcastle-on-Tyne.)

BUBB: SIDNEY JAMES, "Olive Mount," Altofts, Yorkshire. (Leeds School of Architecture.)

CHAPMAN: EDWARD GILBERT JOHN, 25 The Green, Kew, Surrey. (Architectural Association.)

CORFIELD: CLAUD WILLIAM ROGER, Strand Chambers, Falmouth. (University of Cambridge.)

FLETCHER: LIONEL BIRAM, "Brookside," Windle, St. Helens. (Liverpool School of Architecture.)

GAVIN: ALEXANDER GIRAUD, Broomfield, Woodham Road, Woking. (University of Cambridge.)

JOSEPH: PETER LESLIE, 9 Moorland Road, Edgbaston. (Birmingham School of Architecture.)

LLOYD: KENNETH ALFRED, 185 Bushbury Road, Wolverhampton. (Birmingham School of Architecture.)

McCulloch: DUNCAN (JUNR.), 115 Ledard Road, Glasgow, S.2. (Glasgow School of Architecture.)
 Machin: NORMAN CADWALADR, 37 Butts Road, Walsall. (Birmingham School of Architecture.)
 Mallorie: JOHN TRINDER, Barham Rectory, Canterbury, Kent. (Liverpool School of Architecture.)
 Neil: ROBERT, 50 Belville Street, Greenock. (Glasgow School of Architecture.)
 O'Hara: FRANCIS P., 59 Gilmore Place, Edinburgh. (Edinburgh College of Art.)
 Playle: DAVID HOWARD, 14 Woodholm Road, Ecclesall, Sheffield. (University of Sheffield.)
 Pritchard: MORRIS THOMAS, 6 Bowydd Road, Blaenau-Ffestiniog, N. Wales. (Liverpool School of Architecture.)
 Salkeld: GEORGE ARTHUR, 1 Castle Street, Worcester. (Birmingham School of Architecture.)
 Smith: STANLEY, 56 Plasterton Avenue, Cardiff. (Welsh School of Architecture, Cardiff.)
 Somerville: JAMES LEES, 60 Inveresk Road, Musselburgh. (Edinburgh College of Art.)
 Syme: RAYMOND WALTER, P.O. Box 67, Hawera, New Zealand. (Auckland University College, New Zealand.)
 Vist: GEORGE BRAMWELL, 19 Palace Road, London, N.8. (Northern Polytechnic, London.)
 Webster: SYDNEY, "Roseville," Halfpenny Lane, Pontefract, Yorks. (Leeds School of Architecture.)
 White: MILDRED (Mrs.), Architectural Association, 34 Bedford Square, W.C.1. (Southend School of Architecture.)
 Winder: ARTHUR SMALLWOOD, 130 Queens Road, London, W.2. (University of Cambridge.)
 Wright: HAROLD MAURICE, "Woodstock," 22 Scott Road, Walsall, Staffs. (Birmingham School of Architecture.)

R.I.B.A. PROBATIONERS

During the month of March 1935 the following were enrolled as Probationers of the Royal Institute:—

Adams: JOHN TREADWELL, 113 Ashburnham Road, Luton, Bedfordshire.
 Billing: JAMES MILNE MONRO, Stamford, Bearsden, Glasgow.
 Blade: ERIC ALFRED, 29 Princes Avenue, Palmers Green, N.13.

NOTES FROM THE MINUTES OF THE COUNCIL

15 April 1935

NEW LIBRARY CATALOGUE

The Council accepted with grateful thanks the generous offer of Sir Banister Fletcher (Past-President) to give £500 for printing a new catalogue of the R.I.B.A. Library.

BRITISH ARCHITECTS' CONFERENCE, 1936

On the recommendation of the Allied Societies' Conference the Council accepted the invitation of the Hampshire and Isle of Wight Architectural Association to hold the British Architects' Conference in the Southampton and Winchester area in 1936.

EXAMINATIONS

Special Final Examination, Southern Rhodesia, December 1934

Intermediate Examination, Colombo, Ceylon, November 1934

Intermediate Examination, Cairo, Egypt, November 1934

The Board of Architectural Education reported the results of the above examinations.

THE R.I.B.A. HENRY L. FLORENCE BURSARY, 1935

The Board reported that the President, in consultation with the officers of the Board of Architectural Education and Mr. Henry M. Fletcher [F.], has awarded the Bursary to Mr. W. G. Holford, B.Arch. [A.].

THE BOARD OF ARCHITECTURAL EDUCATION

The officers of the Board for the year ending 31 March 1936 were appointed as follows:—

CORFIELD: CLAUD WILLIAM ROGER, Strand Chambers, Falmouth.
 CRAIG: DAVID MAXTONE, 45 Leamington Terrace, Edinburgh.
 Fidler: KENNETH GORDON, 20 Highmoor Road, Caversham, Reading.
 FOVARGUE: HUBERT, 12 The Causeway, March, Cambs.
 FOXALL: JOHN HOWARD, Brynteg, Taff's Well.
 FREEMAN: ALBERT MARTIN, 7 Manor Place, E.8.
 GLEAVE: JOSEPH, 63 Manchester Road, Walkden, Lancs.
 GRAHAM: JOHN NETHERBY, 4 Pitcullen Crescent, Perth, Scotland.
 HARRIS: SIDNEY JOHN, "Cross Key's Hotel," Chadwell St. Mary, Essex.
 HENCHY: ALBERT FRANCIS, "Sunbury," Thorold Road, Farnham, Surrey.
 HOWARTH: THOMAS, "Mayfield," Ribby Road, Kirkham, Nr. Preston.
 HUGHES: GEORGE BRIAN, 20 Pentrepoeth Road, Morriston, Swansea.
 JONES: JOHN DAVID, 105 Bridgend Road, Aberkenfig, Nr. Bridgend, Glam.
 KENNEDY: JAMES COWIE, "Midbank," Crescent Road, Bishops Cleeve, Heris.
 MCINTOSH: IAN JOHNSTONE, 131 Saughtonhall Drive, Edinburgh, 12.
 MARGO: HAROLD DAVID, c/o Liverpool School of Architecture, The University, Liverpool.
 MILLER: WILLIAM PERCIVAL, 169 Westgate Road, Bury St. Edmunds, Suffolk.
 PATTON: HENRY ALEXANDER, "Dun-Iris," Bangor, Co. Down, Ireland.
 REDDIE: LESLIE ANGUS, 69 Kings Road, Hr. Bebington, Cheshire.
 ROSENBLUM: JOHN MICHAEL, 4 Grange Terrace, Leeds, 7.
 SALAMAN: EUSTON DAVID PHILIP, 27 Dartmoor Street, W.8.
 SIMPSON: WILLIAM JOHN CATTO, "Little Elrick," Maud, Aberdeen-shire.
 SNELL: JACK STANLEY SAXON, "Datchet," 34 Sherwood Road, Addiscombe, Croydon.
 SYME: RAYMOND WALTER, P.O., Box 67, Hawera, New Zealand.
 THORNE: FRANK RICHARD, "Thornington," Wingate Road, Luton, Beds.
 WALKER: CHARLES HERBERT, 6 Connaught Road, Stroud Green, N.4.
 WILKINSON: EDWARD BRIAN, "West-Lea," Thorpe Lane, Guiseley, Nr. Leeds.
 WILLIAMS: FRANK CLIFFORD, 3 Bath Terrace, Port Talbot, Glam.
 WORTHINGTON: CLIFFORD, Arbroath House, Picton Road, Hakin, Milford Haven.

Mr. T. A. Darcy Braddell, Chairman.	
Mr. Hubert Lidbetter [Chairman of the Examinations Committee]	} Vice-Chairmen.
Professor L. B. Budden [Chairman of the Schools Committee]	
Mr. Stephen Welsh [Chairman of the Prizes and Scholarships Committee]	
Mr. A. B. Knapp-Fisher, Hon. Secretary.	

The R.I.B.A. Members of the Board and its various Committees were appointed.

OBITUARY

The sincere sympathy of the Council was conveyed to the relatives of the late Mr. William Milburn, J.P. (Past-Member of Council).

POLICY FOR FUTURE EXHIBITIONS

On the recommendation of the Art Standing Committee and the Public Relations Committee the Council approved the proposals outlined in a memorandum prepared by Mr. R. A. Duncan [A.], submitted by the Exhibition Sub-committee with regard to the policy to be followed in arranging future exhibitions.

The first of the large exhibitions to be organised in accordance with these proposals will be held in the early spring of 1936 and the title will be "The Architect's Influence in Industry."

SESSIONAL PAPERS

The programme of Sessional Papers for the Session 1935-1936 submitted by the Sessional Papers Committee was approved.

SUGGESTIONS FOR IMPROVING THE USEFULNESS OF THE R.I.B.A.

A small *ad hoc* Committee has been appointed to consider and report upon the suggestion that a Junior Members Committee should be set up.

ADVISORY COMMITTEE OF THE DEPARTMENT OF ARCHITECTURE, SURVEYING AND BUILDING OF THE NORTHERN POLYTECHNIC

Mr. Hubert Lidbetter [F.] has been appointed to represent the R.I.B.A. on the Advisory Committee of the Department of Architecture, Surveying and Building of the Northern Polytechnic.

THE ELMES TESTIMONIAL FUND

Mr. Duncan A. Campbell [F.] has been reappointed as the R.I.B.A. representative on the Trustees of the Elmes Testimonial Fund.

SEVENTH INTERNATIONAL CONGRESS FOR ART EDUCATION, DRAWING AND ART APPLIED TO INDUSTRY

Lt.-Col. H. P. Cart de Lafontaine [F.] has been appointed as the R.I.B.A. representative on the British Committee for the Seventh International Congress for Art Education, Drawing and Art applied to Industry.

SIXTH INTERNATIONAL CONGRESS FOR SCIENTIFIC MANAGEMENT

The Council have made a donation of £5 5s. towards the funds of the above Congress.

THE ANTI-NOISE LEAGUE

The Council have made a grant of £2 2s. to the Anti-Noise League for the year 1935.

THE NOISE ABATEMENT EXHIBITION

The Council have authorised the Science Standing Committee to arrange an exhibit at the Noise Abatement Exhibition in June.

MEMBERSHIP

The following members were elected:—

As Fellows	5
As Associates	20
As Licentiates	6

Election: 13 May 1935.—Applications for membership were approved as follows:—

As Hon. Corresponding Member	1 application
As Fellows	8 applications
As Associates	11
As Licentiates	8

Reinstatement.—The following ex-members were reinstated:—

As Fellows: Sir Reginald Blomfield [Retired Fellow],
Charles Frederick Ward.
As Associate: Sefton Stockford Careless.
As Licentiates: John Francis Chambers,
Daniel Herbert Richards.

Resignations.—The following resignations were accepted with regret:—

Montague Alton Bazzeley [F].
Mrs. Barbara Poushkiné Köllerström [A].
William Caie Walker [A].
Leonard Freeth Bagnall [L].
Eugene Charles Beaumont [L].
Alfred Jenkins [L].

Transfer to the Retired Members Class.—The following members were transferred to the Retired Members Class:—

As Retired Fellows: Henry Langton Goddard.
Charles Henry Bourne Quennell.
William Edward Riley.

Notices

THE ONE HUNDRED AND FIRST ANNUAL GENERAL MEETING, 13 MAY 1935

The One Hundred and First Annual General Meeting will be held on Monday, 13 May 1935, at 8 p.m.

SPECIAL GENERAL MEETING, 13 MAY 1935

At the conclusion of the Annual General Meeting a Special General Meeting will be held for the purpose of confirming Resolutions passed at the Special General Meeting held on Monday, 15 April 1935, concerning the proposed new Bye-law 43A.

(Details of the above meetings were published in the JOURNAL of 27 April.)

BRITISH ARCHITECTS' CONFERENCE, GLASGOW, 19-22 JUNE 1935

Final arrangements for all the events of the Conference are now being made. It is hoped that all members and students who have not already done so will at once refer to the programme sent to them with the last issue of the JOURNAL and send in their names without delay for such of the events as they desire to take part in.

Members of the R.I.B.A. and the Allied and Associated Societies who are officials of local authorities will be cordially welcomed as delegates to the Conference.

TRAVELLING FACILITIES

The railway companies in Great Britain and the Irish Free State have agreed to issue return tickets to Glasgow at a reduced rate, namely, the ordinary single fare and one-third for the double journey, to members and their friends who attend the Conference.

Members who desire to take advantage of this special reduced fare concession must present at the booking office a signed voucher to be previously obtained from the Secretary R.I.B.A.

CONFERENCE EXHIBITION

Since the publication of the preliminary programme of the Conference, details have been received regarding an exhibition which it is proposed to arrange in connection with the Conference. The exhibition, which will consist of photographs, will illustrate architectural development in the area of the Glasgow Institute of Architects during the last century and will show the progress made in this district towards a manner of architecture expressive of the tendencies of the time in Scotland.

THE USE OF THE TITLES "CHARTERED ARCHITECT" AND "REGISTERED ARCHITECT"

Now that the Registration Act is in force the Council have been asked to give advice with regard to the best way to use the title "Registered Architect" by members of the R.I.B.A. who have been placed on the Register, and who already have the right to use the designation "Chartered Architect."

The Council recommend that members of the R.I.B.A. who have been registered should use the designation "Chartered and Registered Architect."

NEW BUILDING MATERIALS AND PREPARATIONS

The Science Standing Committee wish to draw attention to the fact that information in the records of the Building Research

Station, Garston, Watford, is freely available to any member of the architectural profession, and suggest that architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the Director for any information he can impart regarding their properties and application.

OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

BIRMINGHAM: NEW MUNICIPAL OFFICES

The General Purposes Committee of the City of Birmingham invite architects of British nationality and practising in the British Isles to submit, in competition, designs for new Municipal Offices.

Assessor: Sir Reginald Blomfield, R.A., F.S.A.

Premiums: £1,000, £600, £400 and £250.

Last day for receiving designs: 28 June 1935.

Last day for questions: 30 March 1935.

BISHOPSGATE: NEW POLICE STATION AND BUILDINGS

The Corporation of the City of London invite architects whose principal offices are within the City of London or the area of the Metropolitan Police to submit, in competition, designs for a new Police Station, Dwellings and Hospital in Bishopsgate.

Assessor: Mr. H. Austen Hall [F.].

Premiums: £250, £100 and £50.

Last day for receiving designs: 31 May 1935.

Last day for questions: 25 March 1935.

HERTFORD: NEW CENTRAL COUNTY BUILDINGS
The Hertfordshire County Council invite architects to submit, in competition, designs for new Central County Buildings to be erected at Hertford.

Assessor: Mr. Robert Atkinson [F.].

Premiums: £350, £250 and £150.

Last day for receiving designs: 1 October 1935.

Last day for questions: 1 July 1935.

Conditions may be obtained on application to The Clerk of the County Council, Clerk of the Peace Office, Hertford.

Deposit £2 2s.

KENDAL, WESTMORLAND: NEW COUNTY OFFICES

The Westmorland County Council invite architects of British nationality and practising in the British Isles to submit, in competition, designs for new County Offices to be erected at Kendal.

Assessor: Mr. G. H. Foggitt [F.].

Premiums: £200, £125 and £75.

Last day for receiving designs: 4 July 1935.

Last day for questions: 2 May 1935.

ROMFORD: NEW MUNICIPAL OFFICES

The Romford Urban District Council invite architects of British nationality and practising in the British Isles to submit, in competition, designs for new Municipal Offices at Romford.

Assessor: Mr. Kenneth M. B. Cross, M.A. [F.].

Premiums: £250, £100 and £50.

Last day for submitting designs: 29 June 1935.

Last day for questions: 30 April 1935.

SWINDON: NEW MUNICIPAL OFFICES

The Corporation of Swindon invite architects of British nationality and resident in the British Isles to submit, in competition, designs for new Municipal Offices.

Assessor: Prof. A. B. Knapp-Fisher [F.].

Premiums: £350, £250 and £150.

Last day for receiving designs: 31 August 1935.

Last day for questions: 25 May 1935.

Conditions of the competition may be obtained on application to the Town Clerk, Town Hall, Swindon. Deposit £1 1s.

COMPETITION RESULT

GLOUCESTER: CEMETERY CHAPEL AND BUILDINGS

1. Messrs. Petter and Warren [FF.] (Yeovil).
2. Mr. C. S. Frith and Mr. R. J. Potter [A.], Associated Architects (Salisbury).

Highly Commended: Mr. J. Ralph Edwards [A.] (Bristol).

Commended: Mr. Harold E. Todd [A.] (Bristol), Mr. W. J. Stenner [F.] (Bristol), Messrs. Ball and Pope [A.A.] (Weston-super-Mare).

Members' Column

PARTNER WANTED

ASSOCIATE (young) with small progressive practice in the centre of the West Riding requires partner with some connection and personality. References will be required later. Replies will be treated confidentially. Unique opportunity for building extensive practice. Some capital required. Box No. 3535, c/o Secretary R.I.B.A.

CHALET TO LET IN SWITZERLAND

TO BE LET furnished, peasant's mountain chalet near Château d'Oex, Switzerland, designed by owner, A.R.I.B.A., for short period, summer holidays or winter sports. Electricity, modern sanitation. Swiss maid available.—Full particulars apply Ridley, Malthouse Farm, Plumpton, Sussex.

PARTNERSHIP WANTED

F.R.I.B.A. desires to purchase Partnership. Willing to act as assistant at nominal salary for 6 months until negotiations are concluded; 25 years' experience. Expert on construction and supervision. Reply Box 3045, c/o Secretary R.I.B.A.

ASSOCIATE, B.A.Arch.(Cantab.) (29), desires partnership with well-established London firm with up-to-date practice, preferably connected with cinema and similar work. Capital available. Box No. 1535, c/o Secretary R.I.B.A.

YOUNG Associate with six years' good office experience in London wishes to meet another architect already in practice with view to partnership. Box No. 4535, c/o Secretary R.I.B.A.

SITUATION OR PARTNERSHIP WANTED

L.R.I.B.A., with many years' varied experience in organising and supervising the work of a large architectural practice at home and abroad, seeks a position of a similar nature in a bank, commercial firm or municipal corporation. A working partnership arrangement would also be considered. Apply Box No. 2945, c/o Secretary R.I.B.A., 66 Portland Place, W.1.

COLLABORATOR WANTED

YOUNG ARCHITECT, A.R.I.B.A., A.A.Dipl., having a small but growing practice, willing to collaborate on competition or other work with architect in practice. Reply to Box No. 2745, c/o Secretary R.I.B.A.

OFFICE TO LET

ARCHITECT wishes to let office about 13 ft. by 10 ft., unfurnished or furnished, with drawing table, etc. Very good light. Rent moderate. Shaftesbury Avenue district, W.1. Apply Box No. 2845, c/o Secretary R.I.B.A.

CHANGE OF ADDRESS

AS FROM 1 May 1935 the address of Messrs. Knapp-Fisher, Powell and Russell will be 6 Bryanston Street, Marble Arch, W.1. Tel. Welbeck 6095.

NEW PRACTICE

MR. MORRIS HOOPER [J.] is carrying on the business of his father, the late Mr. Vincent Hooper, A.R.I.B.A., under the title of Vincent Hooper and Son, at 67 High Street, Reigate.

MR. WILLIAM G. HENDERSON [J.] has commenced practice at 102 High Street, Inverurie, Aberdeenshire, and will be pleased to receive trade catalogues.

MR. RAYMOND E. HAWKINS [L.] has started in practice at 6 Liverpool Terrace, Worthing (Telephone Worthing 3472), and will be glad to receive trade catalogues, etc.

DISSOLUTION OF PARTNERSHIP

THE PARTNERSHIP heretofore existing between Messrs. P. B. Rigg, F.R.I.B.A., and R. W. H. Vallis, B.Arch.(L'pool), A.R.I.B.A., has been dissolved. Mr. Rigg will practise at 6 South Parade, Weston-super-Mare, and Mr. Vallis at Monmouth House, Frome, each in his own name.

MR. RIGG has also retired from the practice of Rigg, Vallis and Butler at Salisbury, and that practice will continue under the title of Vallis and Butler.

MR. R. G. BOOTH has ceased to be a partner of the firm of Messrs. Edwards, Reid and Booth, Chartered Architects and Surveyors, Colombo and Madras, as from 1 April 1935.

NEW TELEPHONE NUMBER

THE telephone number of Mr. A. Harold Goslett [F.] is now Holborn 9748.

TRADE CATALOGUES WANTED

L. M. CHITALE, F.R.I.B.A., A.M.T.P.L., Chartered Architect and Town Planning Consultant, of New Street, Sripuram, Royapettah, Madras, would be pleased to receive trade catalogues, samples of materials, etc., for buildings such as educational institutions, banks, offices and hospitals.

MR. G. S. DADARKER [J.], 66 Stock Exchange New Building, Appollo Street, Fort, Bombay, will be pleased to receive trade catalogues and any other data on the construction of cinemas and theatres.

A.B.S. Insurance Department

HOUSE PURCHASE SCHEME

(For property in Great Britain only)

IMPORTANT CHANGES

The A.B.S. Insurance Department has for some years made a special feature of negotiating loans for house purchase for architects and their clients with a leading assurance office.

The scheme has now been revised, the amount of the loan being increased to 80 per cent. and the charges of the office's surveyor and solicitor being paid by the assurance office.

Revised Terms

Amount of loan	.. 80 per cent. of the value of the property as certified by the surveyor employed by the office.
Rate of interest	.. 5 per cent. (gross).
Repayment	.. By means of an endowment assurance which discharges the loan at the end of 15 or 20 years or at the earlier death of the borrower.

N.B.—The office does not usually undertake loans under the terms of this prospectus on:—

- Property of which the value exceeds £2,500,
- Property of the bungalow type, or where the accommodation is of such a nature as to render the property not freely marketable,
- Property not in the sole occupation of the borrower, but where such properties are acceptable special terms will be quoted on application.

Special Concessions to Architects

In the case of houses in course of erection, it has been arranged that provided the plan and specification have been approved by the surveyor acting for the office, ONE-HALF of the amount of the loan agreed upon will be advanced on a certificate from the office's surveyor that the walls of the house are erected and the roof on and covered in to his satisfaction.

Please write for full particulars and a quotation from the Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1. Telephone: Welbeck 5721.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

R.I.B.A. JOURNAL

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